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MIND

A QUARTERLY REVIEW

OF
PSYCHOLOGY AND PHILOSOPHY.

EDITED BY

PROF. G. E. MOORE,

WITH THE CO-OPERATION OF PROFS. F. C. BARTLETT AND C. D. BROAD.

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W. DILTHEY.

War einer der letzten Philosophen und Gelehrten, die aus ihrer Gesamtlage heraus auf die geistige Durchdringung des Lebens in seiner ganzen Universalität ausgingen. Dilthey erkannte die Geschichte, deren Wissenschaft ja vor ihm und um ihn herum (Ranken, Mommsen) in höchster Blüte stand, als den umfassenden Ausdruck des Lebens selbst. Indem er nun die Geschichte bis zu den Wirklichkeitszusammenhängen, Wertgestaltungen und Zweckbewusstseinen in ihren Geschlossenheiten durchdachte, drang er zum Wesen der geschichtlichen Vergangenheit vor, das eben das Leben selber ist. Dilthey hat mit dieser Durchdringung des Zusammenhanges von Leben und Denken, von Geschichte und Philosophie, von Realität und Geist, aus der Sehnsucht nach Objektivität, nach objektivem Erfassen der Seele auf der einen Seite und der natürlichen Welt auf der anderen Seite das Leben mit allen seinen Kräften und Bewegungen zum Gegenstand und Grundbegriff der Philosophie gemacht.

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MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY



I.—MILL'S JOINT METHOD (I).

BY REGINALD JACKSON.

MILL proposes both "the Joint Method of Agreement and Difference" and "the Indirect Method of Difference" as titles for what he says "consists in a double employment of the Method of Agreement". There is an impressive body of opinion in support of what, despite conflicting passages, may be said to be Mill's view of what the Method is.¹ If that view is true, both

¹ Cf. Bain, *Logic*, III, v, §6; vi, §4; Fowler, *Inductive Logic*, pp. 160-164; Jevons, *Elementary Lessons in Logic*, pp. 244-247; Lawrie, *Methods of Inductive Inquiry* (MIND, N.S. II); Stebbing, *A Modern Introduction to Logic*, pp. 335-341; Mace, *Principles of Logic*, pp. 294-300. All these logicians endorse Mill's contention that the Joint Method consists in a double employment of the Method of Agreement. But most of them appear to me not to try to answer the question which Mill professes to answer—the question which alone can be properly formulated: "What are Mill's Methods?" In his article, "The Experimental Methods" (*Pure Logic and Other Minor Works*, p. 250), Jevons says: "Many people, indeed, whose reading in logic has not been extensive, think that these are Mill's own methods, that he invented them. Any one at all acquainted with the history of logical science knows, of course, that this is not the case". And Mill himself says that in Herschel's *Discourse on the Study of Natural Philosophy* "alone, of all books which I have met with, the four methods of induction are distinctly recognised" (III, ix, §3). And against this acknowledgment, it may be said, there can be no appeal. But Mill also professes to conduct his exposition of the Methods in accordance with a set of ambitious assumptions (III, x, §1). And although he

Mill's titles are utterly misleading; and it is hard to see how he could have proposed either of them except in a moment of dissatisfaction with the view. But the view is false, and, of the two titles, "the Indirect Method of Difference" nearly suits the facts. My thesis, however, is that the Method of Difference ought to be so conceived as to enable this operation to be subsumed under it, just as what might equally well be called "the Indirect Method of Agreement" is, without discussion, subsumed under the Method of Agreement.

This thesis can, I hope, be both elaborated and established without reference to Mill's acceptance of what has come to be known as the regularity theory of causality. Mill claims: "The only notion of a cause, which the theory of induction requires, is such a notion as can be gained from experience."¹ But he thinks that from experience can be gained such a notion as justifies him in defining "the cause of a phenomenon, to be

accords to these assumptions the status only of what "it has been necessary to suppose, in the first instance, for the sake of simplification" and at once proceeds to disown them, his abandonment of the assumptions, while leading him to qualify his estimate of the reliability of some of the Methods, does not lead him to revise his statement of what the Methods are. In spite, therefore, of the fact that Mill fails, even in his exposition of the Methods, to keep the assumptions constantly in view, I hold that Mill's Methods are, by definition, founded on these assumptions. Accordingly I suggest that most of the logicians who have dealt with Mill's Methods have tried to answer not the question: "What are Mill's Methods?" but the question: "How must Mill's Methods be transformed to suit a set of different and less audacious assumptions?"

Among the logicians of whom this is true Venn must, in view of his attitude toward Plurality of Causes, be numbered (*Empirical Logic*, xvii, cf. ii). Mill thinks that there is Plurality of Causes, but that the Methods ought to be defined as if there were not. Venn thinks that there is not Plurality of Causes but that the Methods ought to be defined as if there were (pp. 421-422). He does not say that the Joint Method consists in a double employment of the Method of Agreement. But he both sharply contrasts the Joint method with the Method of Difference (p. 428) and treats the having only one circumstance in common as a defining character of the positive instances of the Joint Method (p. 430, followed by Hibben, *Inductive Logic*, ix). And his use of the expressions "the Method of Agreement in its simple form" and "the simple Method of Agreement" is appropriate to the usual interpretation. His proposal to call the Joint Method "the Method of Exclusions" has met with some response. This name he says, is "a term for which we have the historic sanction of Bacon's authority" (p. 428). But we have no such sanction for this use of the name. Both Bacon's practice and the ordinary use of the word "exclusion" fit the name not for the Joint Method but for that of which all the Methods are specifications (cf. Joseph, *Introduction to Logic*, pp. 392-393).

¹ *System of Logic*, III, v, §2.

the antecedent, or the concurrence of antecedents, on which it is invariably and *unconditionally* consequent.”¹ What more could the theory of induction require?

Nor will it be necessary to diagnose the various anomalies which Mill tries to sum up under the headings: *Plurality of Causes* and *Intermixture of Effects*, though it will be necessary to formulate the postulates in accordance with which he professes to conduct his exposition of the Methods when he says “it has been necessary to suppose, in the first instance, for the sake of simplification, that this analytical operation is encumbered by no other difficulties than what are essentially inherent in its nature”.²

It will, however, be necessary to examine in some detail Mill's account of both the Method of Agreement and the Method of Difference. An imperfect grasp of the Method of Agreement seems to me the main source of the view I am attacking, while the view I am defending is a view not merely about the Joint Method but also about the Method of Difference.

In two ways Mill could have made things easier not only for his readers but also for himself. He could have begun by assessing the evidential value of a single instance instead of plunging into the assessment of the evidential value of a plurality of instances. And he could have distinguished conclusions warranted by exclusively instantial premises from conclusions warranted only by the conjunction of instantial premises with causal postulates.

The single proposition, *What does happen in the absence of a circumstance can happen in the absence of that circumstance*, may be exhibited, in accordance with the convention which prescribes the predication of indispensability and sufficiency only of antecedents in relation to consequents and not conversely, as a conjunction of the two propositions: *No antecedent is indispensable to any consequent which occurs in its absence* and *No antecedent is sufficient to any consequent in whose absence it occurs*. These two propositions, which are independent of all causal postulates, serve, when certain qualifications are embodied, as the principles of elimination on which the Methods depend. The two propositions are true, however, only if, by saying that one circumstance occurs in the absence of another, is meant that the former occurs at some time and the latter at no time. But so interpreted they cannot serve as principles of elimination, since we never come by instantial premises of the form “*x* occurs

¹ III, v, §6.

² III, x, §1.

at no time". It might seem necessary, therefore, to recast the two propositions thus: *Nothing is an indispensable proximate antecedent to anything which occurs in its proximate absence and Nothing is a sufficient proximate antecedent to anything in whose proximate absence it occurs.* We should then have to stipulate that all our instances are of proximate antecedents and consequents. But the new formulæ are too narrow. It would be better to adopt: *Nothing need precede by a given interval anything which occurs without being preceded by it by that interval and Nothing need be succeeded by a given interval by anything which does not succeed it by that interval.* Then, whatever be the temporal interval between the antecedent and the consequent of any instance, any elimination based on that instance must be qualified by a reference to that interval, and the interval between the antecedents and the consequents of all instances consulted in a single inquiry must be supposed constant. Mill, indeed, claims: "Whether the effect coincides in point of time with, or immediately follows, the hindmost of its conditions, is immaterial". But he also says that "when we are in doubt, between two co-existent phenomena, which is cause and which effect, we rightly deem the question solved if we can ascertain which of them preceded the other".¹ Now if a cause is both indispensable and sufficient to its effect it is hard to see what the question, which of two co-existents is cause and which effect, can be. It seems better, therefore, to insist that cause precedes effect.

But can even our new formulæ serve as principles of elimination? I have said that we never come by instantial premises of the form "*x* occurs at no time". It is necessary to add that we never come by instantial premises even of the form "*x* does not occur at this time". For it is only within a restricted area that perception guarantees the non-occurrence of an event of a given kind. The single instance,² *A . . . — a . . .*, may be thought

¹ III, v, §7.

² I adopt what I take to be Mill's notation. "We shall denote antecedents by the large letters of the alphabet, and the consequents corresponding to them by the small" (III, viii, §1). This plan has been unfavourably received. But it admirably serves its purpose. What Venn calls "its suggestion of a simplicity, and a readiness to adapt herself to our wants, on the part of Nature, which she is far from displaying" (*Empirical Logic*, p. 60, cf. p. 411) is its purpose. And we may disapprove this purpose as Venn, with qualifications, does. But Bradley's objection against the fitness of the notation for the purpose must be overruled: "If his letters mean anything, they involve a flagrant *petitio*; and if they do not, their suggestion must tend to confuse us" (*Logic*, Bk. II.

to warrant the conclusions: *No non-factor of A . . . is indispensable to any factor of a . . .* and *No factor of A . . . is sufficient to any non-factor of a . . .* But the instance would really warrant these conclusions only if A . . . were an antecedent, and a . . . a consequent, *totality*, i.e., only if each embraced all contemporary circumstances. Alternatively, we are justified in concluding only that no non-contemporary of A . . . is indispensable to any contemporary of a . . . and no contemporary of A . . . sufficient to any non-contemporary of a . . . But there is a *via media* and it is Mill's. Admitting that our antecedents and consequents do not embrace all contemporary circumstances, we claim that they do embrace all possibly relevant contemporary circumstances, unloading our burden on to what Mill calls "spontaneous generalisations".¹ Whether the basis of elimination be a plurality of instances or a single instance, cannot affect the legitimacy of this device. Let it be postulated, then, that our antecedents and consequents do not relevantly differ from momentary totalities.

With that reservation we can claim that our conclusions can be reached by immediate inference by modal consequence and are less ambitious than they look. They are not generalisations. They merely deny the impossibility respectively of the sequence of any factor of a . . . upon an antecedent containing no non-factor of A . . . and of the non-sequence of any non-factor of a . . . upon any factor of A . . . But if we venture to affirm that what is possible on this occasion is possible on other occasions we generalise, however safely, by postulating the indifference of time.

Mill introduces the distinction between the Method of Agreement and the Method of Difference by representing the former as an argument from exclusively positive instances and the latter as an argument from both positive and negative instances. Since an instance is positive or negative according to the question asked, the same pair of instances may suffice to illustrate both Methods. From the pair of instances, AB-*ab* and AC-*ac*, we reach by the Method of Agreement conclusions about A and a, by the

Pt. II, iii, §12, followed by Welton, *Manual of Logic*, vol. ii, p. 147). To escape between the horns of this dilemma it is necessary only to say what the letters *do* mean. The notation indicates what the instances, in accordance with Mill's professed assumptions, are, not what the investigator knows them to be. The correspondence is that of cause to effect, not of known cause to known effect. Even at the conclusion of an investigation of the instances, ABC-*abc* and ADE-*ade*, the investigator knows of no correspondence but that of A and a.

¹ III, iv, §2.

Method of Difference conclusions about B and *b* (or C and *c*). This mode of illustration allows the negative instance of the Method of Difference to have a circumstance which the positive instance lacks, a contingency which Mill, in view of his postulates needlessly, excludes.

Independently of any causal postulate, the conclusions warranted in accordance with our two principles of elimination are as follows.

The instance AB-*ab* warrants :

- No non-factor ¹ of AB is indispensable to any factor of *a* (1)
- No non-factor of AB is indispensable to any factor of *b* (2)
- No factor of A is sufficient to any non-factor of *ab* (3)
- No factor of B is sufficient to any non-factor of *ab* (4)

The instance AC-*ac* warrants :

- No non-factor of AC is indispensable to any factor of *a* (5)
- No non-factor of AC is indispensable to any factor of *c* (6)
- No factor of A is sufficient to any non-factor of *ac* (7)
- No factor of C is sufficient to any non-factor of *ac* (8)

To reach by the Method of Agreement conclusions about A and *a* we must select propositions 1, 3, 5, and 7. Then we must argue :

(1, 5) Nothing which is either a non-factor of AB or a non-factor of AC is indispensable to any factor of *a*.

Therefore, provided that no factor is common to B and C, no non-factor of A is indispensable to any factor of *a*. (I.)

(3, 7) No factor of A is sufficient to anything which is either a non-factor of *ab* or a non-factor of *ac*.

Therefore, provided that no factor is common to *b* and *c*, no factor of A is sufficient to any non-factor of *a*. (I'.)

To reach by the Method of Difference conclusions about B and *b* we must select propositions 2, 4, 5 and 7. Then we must argue :

(7) Provided that no factor is common to *b* and *ac*, no factor of A is sufficient to any factor of *b*.

Therefore, (2, 7), nothing which is either a non-factor of AB or a factor of A is both indispensable and sufficient to any factor of *b*. Therefore, no non-factor of B is both indispensable and sufficient to any factor of *b*. (II.)

(5) Provided that no factor is common to B and AC, no factor of B is indispensable to any factor of *a*.

¹ I adopt, throughout, the convention according to which a whole is among its factors.

Therefore, (4, 5), no factor of B is either sufficient to any non-factor of ab or indispensable to any factor of a .

Therefore, no factor of B is both sufficient and indispensable to any non-factor of b . (II'.)¹

¹ For the following expansions of the above arguments, as well as for some other helpful suggestions, I am indebted to Professor Broad.

Propositions (1) to (8) may be reformulated thus :

If x is indispensable to y and y is a factor of a , then x is a factor of

AB (1)

If x is indispensable to y and y is a factor of b , then x is a factor of

AB (2)

If x is a factor of A and x is sufficient to y , then y is a factor of ab (3)

If x is a factor of B and x is sufficient to y , then y is a factor of ab (4)

If x is indispensable to y and y is a factor of a , then x is a factor of

AC (5)

If x is indispensable to y and y is a factor of c , then x is a factor of

AC (6)

If x is a factor of A and x is sufficient to y , then y is a factor of ac (7)

If x is a factor of C and x is sufficient to y , then y is a factor of ac (8)

Method of Agreement.

(1) and (5) together give : If x is indispensable to y and y is a factor of a , then x is a factor of both AB and AC. Assume that B and C have no factor in common. Then, if x is a factor of both AB and AC, x must be a factor of A. Therefore, if x is indispensable to y and y is a factor of a , then x is a factor of A. (I.)

(3) and (7) together give : If x is a factor of A and x is sufficient to y , then y is a factor of both ab and ac . Assume that b and c have no factor in common. Then, if y is a factor of both ab and ac , y must be a factor of a . Therefore, if x is a factor of A and x is sufficient to y , then y is a factor of a . (I'.)

Method of Difference. (The operation grounded on the equivalence of If $p.q$ then r , If $p.\bar{r}$ then \bar{q} , If $q.\bar{r}$ then \bar{p} , will be called "contraposition".)

(7) If x is a factor of A and x is sufficient to y , then y is a factor of ac . Assume that ac and b have no factor in common. Then, if y is a factor of ac , y is not a factor of b . Therefore, if x is a factor of A and x is sufficient to y , then y is not a factor of b . (α .)

Therefore, by contraposition, if x is a factor of A and y is a factor of b , then x is not sufficient to y . (α' .)

From (2) by contraposition we get : If x is not a factor of AB and y is a factor of b , then x is not indispensable to y . (β .)

(α') and (β) together give : If x is either a factor of A or not a factor of AB and y is a factor of b , then x is either not sufficient or not indispensable to y . (γ .)

Now x is either a factor of A or a factor of B or not a factor of AB. Therefore, if x is not a factor of B, x is either a factor of A or not a factor of AB. (δ .)

(γ) and (δ) together give : If x is not a factor of β and y is a factor of b , then x is not both sufficient and indispensable to y . (II.)

[Continuation of footnote on next page.]

But a comparison of the achievements of the two Methods is more conveniently made by identifying¹ the inquiries subserved by them. The Method of Agreement reaches the conclusions: *No non-factor of A is indispensable to any factor of a* (I), and *No factor of A is sufficient to any non-factor of a* (I'). The Method of Difference reaches the conclusions: *No non-factor of A is both indispensable and sufficient to any factor of a* (II), and *No factor of A is both indispensable and sufficient to any non-factor of a* (II'). It appears, then, that while the Method of Agreement reaches concerning A and a precisely the conclusions which can be reached concerning an antecedent and a consequent totality, the Method of Difference reaches conclusions which differ from those only in being less determinate. It is important to see why this must be so.

Suppose, then, that we want to know about A and a. Given (i) the instance AB-ab, what further help is afforded by (ii) the instance AC-ac, permitting an application of the Method of Agreement, and what further help is afforded by (iii) the instance B-b, permitting an application of the Method of Difference?

From (i) we learn :

No non-factor of A, unless it is a factor of B, is indispensable to any factor of a. [Entailed by (1).]

No factor of A is sufficient to any non-factor of a, unless to a factor of b. [Entailed by (3).]

{Or, by contraposition, If y is a factor of b and x is both sufficient and indispensable to y, then x is a factor of B.}

(5) If x is indispensable to y and y is a factor of a, then x is a factor of AC. Assume that AC and B have no factor in common. Then, if x is a factor of AC, x is not a factor of B. Therefore, if x is indispensable to y and y is a factor of a, then x is not a factor of B. (α .)

Therefore, by contraposition, if x is a factor of B and y is a factor of a, then x is not indispensable to y. (α' .)

From (4) by contraposition we get : If x is a factor of B and y is not a factor of ab, then x is not sufficient to y. (β .)

(α') and (β) together give : If x is a factor of B and y is either a factor of a or not a factor of ab, then x is either not indispensable or not sufficient to y. (γ .)

Now y is either a factor of a or a factor of b or not a factor of ab. Therefore, if y is not a factor of b, y is either a factor of a or not a factor of ab. (δ .)

(γ) and (δ) together give : If x is a factor of B and y is not a factor of b, then x is not both indispensable and sufficient to y. (II'.)

{Or, by contraposition, if x is a factor of B and x is both indispensable and sufficient to y, then y is a factor of b.}

¹ Our instances being thus determined as positive or negative, one pair of instances no longer suffices to illustrate both Methods.

What we need, in order to reach the conclusions which could be reached if *A* were an antecedent and *a* a consequent totality, is authority to delete the reservations.

Now from (ii) we learn :

No non-factor of *AC* is indispensable to any factor of *a*. [(5)].

No factor of *A* is sufficient to any non-factor of *ac*. [(7)].

And from these propositions, stipulating that we are dealing with exclusive agents, we infer :

No factor of *B* is indispensable to any factor of *a*.

No factor of *A* is sufficient to any factor of *b*.

And this is precisely what we need. But (iii) yields only an inferior substitute :

No non-factor of *B* is indispensable to any factor of *b*.

No factor of *B* is sufficient to any non-factor of *b*.

Again stipulating that our agents are exclusive, we infer :

No factor of *A* is indispensable to any factor of *b*.

No factor of *B* is sufficient to any factor of *a*.

Here we find indispensability where we need sufficiency and sufficiency where we need indispensability. This inferiority of the Method of Difference, in the absence of all causal postulates, is determined by the fact that we cannot learn from (i) :

No non-factor of *A*, unless it is a factor of *B*, is sufficient to any factor of *a*.

No factor of *A* is indispensable to any factor of *a*, unless to a factor of *b*.

It is these propositions which the conclusions warranted by (iii) are fitted to supplement so as to yield determinate conclusions.

So far without causal postulates. But without causal postulates we could not, given even that *A* and *a* were respectively an antecedent and a consequent totality, reach either the conclusion that *A* is indispensable, or the conclusion that *A* is sufficient, to *a*. And it may well be that when the instantial premises of the Methods are supplemented, as Mill recognises that they must be, by causal postulates, the Method of Difference draws level with the Method of Agreement. It is not easy to conceive postulates which would enable the Method of Difference to draw ahead.

The postulates in accordance with which Mill professes to conduct his exposition of the Methods can I think be compressed into the statement : Every circumstance of the complex antecedent of any instance is both the sole indispensable and the sole sufficient condition of one of the equal number of circumstances of the complex consequent of that instance and is neither

indispensable nor sufficient to any other circumstance.¹ Mill makes it plain that, though he thinks that "the obscurity and difficulty of the investigation of the laws of phenomena is singularly increased by" ² Plurality of Causes and Intermixture of Effects, it is his intention, in expounding the Methods, to ignore these complications. There is a difficulty, however, in his admission: "The cause indeed may not be simple; it may consist of an assemblage of conditions; but we have supposed that there was only one possible assemblage of conditions, from which the given effect could result."³ Now I take it that neither what Mill calls "the phenomenon under investigation" nor what he calls "circumstances" need be simple. But he does proceed upon the assumption that "the different antecedents and consequents" are "so far as the case requires, ascertained and discriminated from one another".⁴ What he calls a "circumstance", then, must not be relevantly complex. Yet he here seems to admit that, *e.g.*, the cause of *a* may be AB. But, if so, either the case is one of Intermixture of Effects, or *a* is relevantly complex and the different consequents are *not* "so far as the case requires, ascertained and discriminated from one another". I propose, therefore, to disregard this admission.

Circumstances being supposed, then, not relevantly complex, the conclusions warranted by the instantial premises of the Method of Agreement may be formulated: *Nothing but A is indispensable to a* and *A is sufficient to nothing but a*, and the conclusions warranted by the instantial premises of the Method of Difference may be formulated: *Nothing but A is both indispen-*

¹ Much misunderstanding might have been averted if only Mill had recognised that, if it is upon these assumptions that we are to distinguish "modes of singling out from among the circumstances which precede or follow a phenomenon, those with which it is really connected by an invariable law," then our proper course is to generalise the problem. Whether or not Mill's Methods can be legitimately applied to causal problems, it is certain that methods essentially similar can be legitimately applied to non-causal problems. It is not too much to say, even, that the whole difficulty of grasping the relations between the Methods has arisen from the recalcitrance of the matter to which they have been represented as applicable and from the consequent failure to keep the defining assumptions constantly in view. It would have been better, while engaged in distinguishing the Methods, to forget about causality, and to let large letters denote husbands and small letters the corresponding wives, and to ask by what methods we could find the wife of a given husband or the husband of a given wife if we had to do with a group of monogamously married persons and if our data were restricted to lists of those who attended public functions, with the proviso that nobody ever attended without conjugal support.

² III, x, §1.

³ III, x, §1.

⁴ III, vii, §2.

sable and sufficient to a and A is both indispensable and sufficient to nothing but a .¹ Either member of either pair, supplemented by Mill's causal postulates, suffices to demonstrate: A is both indispensable and sufficient to a .

Mill's exposition of the Method of Agreement and the Method of Difference is complicated by his recognition that the inquiries subserved by them "may be either inquiries into the cause of a given effect, or into the effects or properties of a given cause".² Now the Method of Agreement eliminates what fails to be present when the phenomenon under investigation is present, and the Method of Difference³ eliminates what fails to be absent when the phenomenon under investigation is absent. But the ground of elimination varies according to the question asked in a way which cuts across this classification. The Method of Agreement, seeking the cause of a given effect, eliminates what fails to be present on the ground that it is not indispensable to the phenomenon, but, seeking the effect of a given cause, eliminates what fails to be present on the ground that the phenomenon is not sufficient to it. The Method of Difference, seeking the cause of a given effect, eliminates what fails to be absent on the ground that it is not sufficient to the phenomenon, but, seeking the effect of a given cause, eliminates what fails to be absent on the ground that the phenomenon is not indispensable to it.

¹ To Prof. Broad I am indebted for the following expansion of this contention. The conclusions of p. 424 concerning A and a may be reformulated thus:

If y is a factor of a and x is indispensable to y , then x is a factor of A . (I.)

If x is a factor of A and x is sufficient to y , then y is a factor of a . (I')

If y is a factor of a and x is both indispensable and sufficient to y , then x is a factor of A . (II.)

If x is a factor of A and x is both indispensable and sufficient to y , then y is a factor of a . (II')

The assumption that circumstances are not relevantly complex is equivalent to the assumption that "is identical with A (or a)" is substitutable for "is a factor of A (or a)". On this assumption, therefore, we may substitute:

If y is a and x is indispensable to y then x is A . (I.)

If x is A and x is sufficient to y then y is a . (I')

If y is a and x is both indispensable and sufficient to y then x is A . (II.)

If x is A and x is both indispensable and sufficient to y then y is a . (II')

² III, viii, §1.

³ This is true only of the treatment of its negative instance.

Now it is obvious that the kind of evidence and, therefore, the kind of argument *required* to establish a certain proposition cannot vary with the question to which the proposition is an answer. And, while, "What is the cause of a ?" and "What is the effect of A ?" are different questions, " A is the cause of a " and " a is the effect of A " are simply converse propositions. But the kind of search prescribed may vary with the question asked and in such a way as to make different kinds of evidence and, therefore, of argument *available*.

Asked "Who is the wife of Darby?" I examine Darby. I could find out by examining Joan. But it is only after finding out by examining Darby that I know that I could have found out by examining Joan. And if I pursue a method of elimination I may reach the conclusion that Joan is the wife of Darby because no other woman is, but not the conclusion that Darby is the husband of Joan because no other man is. Suppose the investigation confined to a group all the members of which are known to be monogamously married. All the women save Joan are wives of others than Darby, and all the men save Darby are husbands of others than Joan. Then any such fragment of evidence as that W_1 is the wife of H_1 can be used either to support the proposition that W_1 is not the wife of Darby or to support the proposition that H_1 is not the husband of Joan. And the totality of such evidence can be used to argue either that Joan is the wife of Darby because no other woman is or that Darby is the husband of Joan because no other man is. But the total evidence made available by the kind of search prescribed by the question "Who is the wife of Darby?" might consist of such fragments as that W_1 is not the wife of Darby. We might find out concerning a woman that she is not the wife of Darby without finding out whose wife she is.

Asked "What is the cause of a ?" I examine, if I proceed by the Method of Agreement, the antecedents of various a consequents. If I find that A is the sole circumstance common to the antecedents of two or more a consequents, I infer that A is the cause of a . It must also be true that a is the sole circumstance common to the consequents of those antecedents. But I may have failed to observe this. The instances are: $ABC-abc$, $ADE-ade$. But they are *observed to be*: $ABC-a$. . . , $ADE-a$ Then, while I am able to argue that A is the cause of a because nothing else is, I am not able to argue that a is the effect of A because nothing else is. Rather I can argue that nothing else is the effect of A because a is. If on the other hand the instances are observed to be all that they are, I can argue both from

the premise that nothing but A is indispensable to *a* and from the premise that A is sufficient to nothing but *a*. Now it is clear that both antecedents and consequents ought to be thoroughly examined. For, if only in order to find a set of antecedents of which the cause of *a* is the sole common factor, I must look for a set of consequents of which *a* is the sole common factor. Similarly, if I proceed, by the Method of Difference, from instances observed to be : ABC-*abc*, BC-*bc*, I can argue both from the premise that nothing but A is both indispensable and sufficient to *a* and from the premise that A is both indispensable and sufficient to nothing but *a*, whether I am trying to answer the question "What is the cause of *a* ?" or the question "What is the effect of A ?"

Yet, except for a sentence which in its context looks like an oversight, Mill's exposition of the Method of Agreement seems to be governed by the singular belief that the evidence *required* to establish the proposition, that *a* is the effect of A, is different from the evidence *required* to establish the proposition, that A is the cause of *a*. To find the effect of A, given the instances, ABC-*abc* and ADE-*ade*, "we may reason thus : *b* and *c* are not effects of A, for they were not produced by it in the second experiment ; nor are *d* and *e*, for they were not produced in the first. Whatever is really the effect of A must have been produced in both instances ; now this condition is fulfilled by no circumstance except *a*".¹ So far no use has been made of the datum, that A is the sole circumstance common to the antecedents. Recourse to this datum is not compulsory, and Mill's last sentence plainly authorises the conclusion, that *a* is the effect of A. But Mill does not at once draw this conclusion. He does so only after adding the sentence : "The phenomenon *a* cannot have been the effect of B or C, since it was produced where they were not ; nor of D or E, since it was produced where they were not". This is a different argument, based on a different selection from the available evidence. It could be developed, to match the previous argument, by adding that the circumstance of which *a* is the effect must have been present in both antecedents and that this condition is fulfilled by no circumstance except A. This time it is the datum, that *a* is the sole circumstance common to the consequents, of which no use is made. But does Mill recognise this, or does he think that he is merely reiterating ? In the example, which follows, of the way in which "we inquire, by the Method of Agreement, into the effect of a given cause",

¹ III, viii, §1.

no attempt is made to distinguish two arguments. He goes on to claim: "In a similar manner we may inquire into the cause of a given effect". Given the same instances, "we may conclude by a reasoning similar to that in the preceding example, that A is the antecedent connected with the consequent *a* by a law of causation. B and C, we may say, cannot be causes of *a*, since on its second occurrence they were not present; nor are D and E, for they were not present on its first occurrence. A, alone of the five circumstances, was found among the antecedents of *a* in both instances". This is *exactly* the reasoning of the sentence tacked on to the account of the way in which we find the effect of a given cause. And this time Mill does not supplement it.

Of this feature of Mill's exposition it has been necessary to speak only in order to make sure that I have not contented myself with unduly simplified conceptions of the Method of Agreement and Difference. The connected question, whether the Method of Agreement is exposed to error through anomalies from which the Method of Difference is immune, is not relevant here, since Mill's causal postulates rule out all such anomalies.

More directly relevant to my theme is the feature of Mill's exposition to which I now pass, the unwarrantable discrimination between the Methods whereby he substitutes for his original representation of the Method of Agreement as, like the Method of Difference, an eliminative mode of demonstrative induction, a representation of the Method of Agreement as, unlike the Method of Difference, a non-eliminative mode of problematic induction.¹

Unwarrantable discrimination appears first in Mill's expansion of the statement "Both are methods of *elimination*". The statement is true if what it states is that both are methods of proving a hypothesis by disproving competing hypotheses. And in this respect there is no difference whatever between the two methods. But Mill takes elimination to be "the successive exclusion of the various circumstances which are found to accompany a phenomenon in a given instance, in order to ascertain what are those among them which can be absent consistently with the existence of the phenomenon".² Now if only this is elimination *the Method of Agreement is, but the Method of Difference is not, a method of elimination*. For what the Method of Difference is concerned, in consulting its negative instance, to ascertain is what are those among them which can be present consistently with the non-existence of the phenomenon. And Mill not only

¹ Cf. Johnson, *Logic*, II, x, § 6.

² III, viii, § 3.

does not but cannot offer this as an alternative aim of the "exclusion of the various circumstances". For by the "exclusion of the various circumstances" must be meant, not the proving them not to be causes or effects of the phenomenon (since this is done not in order to ascertain, but by ascertaining, what are those among them which can be absent consistently with the existence of the phenomenon), but the producing or discovering instances of the phenomenon which, unlike the "given instance", are not also instances of them. In this sense of "exclusion" what the Method of Difference does would be to exclude the phenomenon. It seems then, that by "whatever can be eliminated" Mill must mean *whatever can be absent when the phenomenon is present*, and that by "whatever cannot be eliminated" he must mean *whatever cannot be absent when the phenomenon is present*. Yet his conclusion requires him to mean by "whatever cannot be eliminated" *whatever cannot be present when the phenomenon is absent*. For his conclusion is: "The Method of Agreement stands on the ground that whatever can be eliminated, is not connected with the phenomenon by any law. The Method of Difference has for its foundation, that whatever cannot be eliminated, is connected with the phenomenon by a law." With as much justification we could claim that the ground of the Method of Agreement is that *whatever cannot be absent when the phenomenon is present* is connected with the phenomenon, and that the ground of the Method of Difference is that *whatever can be present when the phenomenon is absent* is not connected with the phenomenon. But the truth is that instead of "whatever cannot" we must say "whatever alone cannot", and the difference between "whatever alone cannot be eliminated is connected" and "whatever can be eliminated is not connected" is, provided we take it for granted that *something* is connected, of no account. What Mill has done is, in presenting the Method of Agreement, to allow disproved hypotheses, and, in presenting the Method of Difference, to allow proved hypotheses, to engross his attention.

In formulating the canons of the two Methods, Mill avoids this mistake. But the recognition in the canons that both are methods of proving a hypothesis by disproving competing hypotheses is objectionable in another respect. It is expressed in language which makes each Method applicable to only a special case of a more general type of situation. In requiring that the instances to which the Method of Agreement is applicable "have only one circumstance in common" and that the instances to which the Method of Difference is applicable "have every circumstance in common save one", Mill is incorporating

conditions which must indeed be fulfilled if the methods are to yield solutions, but which need not be fulfilled for the methods to yield progress toward solutions. For positive instances having only two or more circumstances in common, or a positive and a negative instance having every circumstance in common save two or more, would not lack evidential value, but would justify the conclusion that our quarry must be among these two or more circumstances. Instead of a categorical, we should have to content ourselves with an alternative conclusion. But the alternative conclusion would be just as well evidenced and in just the same way as would the categorical conclusion yielded by the more pregnant situations conforming to Mill's formulæ.¹ The difference is of the same kind as that between Barbara and Darii.

In thus narrowly circumscribing, in such a way as to exclude data which the inductive sciences can ill afford to jettison, the types of situation to which the two methods are applicable, Mill's only error is the kind of specialisation which we find in Aristotle and in Euclid, the privilege of the pioneer. So far he is at least impartial in his treatment of the two Methods. But it is just in corrupting this impartiality that the error may become pernicious. If, in his comparison of the two Methods, Mill corrects the error on some occasions while persisting in it in others, unwarrantable discrimination may easily be the issue. For there are three dimensions in which a Method may be assessed. It may be esteemed because it is cogent (because the inference is demonstrative or, if problematic, of high probability), or because premises of the type required are frequently or at least sometimes available, or because the "conclusion",² whether certain or only more or less probable, answers or comes near to answering the question. Now, if we have not, before assessing the Methods, firmly made up our minds about the type of premise and the type of conclusion by which each is defined, we find that in assessing the Methods alternative courses, with alternative presupposed definitions, are open to us. We may say of a Method that it is both cogent and illuminating, but deplore the impossibility or difficulty of coming by premises of the type it requires; or we may say that premises of the type required (where we take a different view of what the type is) are available, but deplore

¹ Cf. Joseph, *An Introduction to Logic*, pp. 430-431.

² What is commonly called the "conclusion" of a problematic inference ought not, if the inference is to be valid, to be so called. What ought to be so called is the secondary proposition that what is commonly so called is probable.

either the uncertainty of the Method or the poverty of the conclusion. Mill holds that the Method of Agreement has the advantage of being the more practicable, but that the Method of Difference has the advantage of being the more cogent. Is this because he relaxes his definition of the type of situation to which the Method of Agreement is applicable and yet fails to scale down its conclusion to the level of what alone the modest premises could demonstrate?

I think that this is part of the explanation. For on the one hand Mill insists: "It is inherent in the peculiar character of the Method of Difference, that the nature of the combinations which it requires is much more strictly defined than in the Method of Agreement. The two instances which are to be compared with one another must be exactly similar, in all circumstances except the one which we are attempting to investigate."¹ And on the other hand he allows that, in order to apply the Method of Agreement, we do not "require instances of so special and determinate a kind. Any instances whatever, in which nature presents us with a phenomenon, may be examined for the purposes of this method; and if all such instances agree in anything, a conclusion of considerable value is already attained. We can seldom, indeed, be sure that the one point of agreement is the only one; but this ignorance does not, as in the Method of Difference, vitiate the conclusion; the certainty of the result, as far as it goes, is not affected."² I take it that Mill thinks that in these passages he is detecting implications of the definitions of the Methods already given in the canons. But what he is really, though unconsciously, doing is to define the Methods afresh. And while the new definition of the Method of Difference does, the new definition of the Method of Agreement does not, tally with the old.

But the difference between the old and the new definition of the Method of Agreement goes far beyond the welcome remission of the demand for instances qualified for such a measure of elimination as would authorise a categorical conclusion. And, if the old definition ought to elicit a mild protest against excessive rigour, the new definition ought to elicit a strong protest against excessive indulgence. The conclusion here allowed to be certain "as far as it goes" is not the alternative proposition that our quarry must be one or other of a set of known circumstances. It is the categorical proposition: "We have ascertained one invariable antecedent or consequent, however many other

¹ III, viii, §3.

² *Ibid.*

invariable antecedents or consequents may still remain unascertained".¹ Now the form of this conclusion is dictated by a cardinal feature of the type of situation in which Mill here pronounces the Method of Agreement applicable. We are not supposed to know that our positive instances have only a number of circumstances in common and to know what these circumstances are. We are supposed to know that our positive instances have one circumstance in common and to know what this circumstance is, without knowing what other circumstances the instances have in common or even whether the instances have any other circumstances in common. In such a situation we could not draw an alternative conclusion because we could not formulate the alternants. Along with the demand that our positive instances be known to differ in every circumstance but one, Mill has abandoned the demand that the extent of their agreement, whatever it may be, be known. The new type of situation is one with which no method of elimination can cope. For "only" has given place to "at least".

Something, but not much, can, I think, be conceded to Mill at this point. If from an examination of a very small number of positive instances we are not justified, as, unless we know that they have only one circumstance (other than that which makes them positive) in common, we are not, in concluding to a cause or an effect, we are also not justified in concluding to any other uniformity. But, on the basis of a very large number of positive instances, we should, whether rightly or wrongly, under certain conditions, conclude to an at least indirect causal connexion (like that of day and night) though not ready to conclude that the detected common circumstance must be either the cause or the effect of the phenomenon. We *do* view coincidences with suspicion, not determined solely by belief in the inadequacy of factors other than those whose operation we suspect. But when we do so we pin our faith either to induction by simple enumeration or to some other mode of problematic inference. I do not want to reject the validity of such inferences, but I do want to claim that, even if Mill is right in holding that the conclusion²

¹ III, viii, §3.

² The nature of this conclusion presents difficulties which could be resolved only by a thorough examination of Mill's version of the regularity theory of causality. By an invariable antecedent which, because not unconditional, is not a cause, I think he means a circumstance which may or may not be indispensable (and so part of the cause) but which is not sufficient (and so not the whole of the cause) and which yet, because always accompanied by the cause or the rest of the cause, does not betray its insufficiency. When he says: "We have ascertained one invariable

to an invariable antecedent or consequent is valid in the type of situation described, he is wrong in holding that the conclusion can be got by an application of the Method of Agreement. How Mill can think that "the certainty of the result, as far as it goes, is not affected" I cannot even begin to say.

Mill's account of the advance from the conclusion here permitted to the conclusion desired completes the degradation of the Method of Agreement. The application of the Method in situations which are not known to satisfy the canon is viewed as not merely permissible but adequately typical, and Mill claims: "It thus appears to be by the Method of Difference alone that we can ever, in the way of direct experience, arrive with certainty at causes".¹ But why can we not do so by consulting positive instances known to conform to the canon of the Method of Agreement? Only, as Mill frequently recognises, because no instances are known to conform. Not, as long as we insist on the canon, because the conclusion of the Method of Agreement is either less informative or less cogent than that of the Method of Difference.

If the Method of Difference is defined as applicable only to a positive and a negative instance which have every circumstance save one in common, while the Method of Agreement is defined as applicable only to a set of positive instances which falsely appear to have only one circumstance in common, then no doubt the Method of Difference is more cogent and the Method

antecedent or consequent, however many other invariable antecedents or consequents may still remain unascertained", Mill is thinking of the invariable antecedent as being at least a part of the cause. But when he says: "Though an invariable antecedent, it may not be the unconditional antecedent of *a*, but may precede it as day precedes night or night day,"² he is recognising the possibility that the invariable antecedent is not even part of the cause. Whether a part of the cause or not, it is distinguished from the unconditional antecedent by the fact that the sequence upon it of the effect is conditioned by its being accompanied by other circumstances.

It is worth noticing that whatever reasoning would justify the conclusion which Mill here approves would justify a similar conclusion in addition to the alternative conclusion permissible where it is known in what circumstances the positive instances agree. For Mill can hardly be making our ignorance a premise. Besides concluding, then, that the cause (or the effect) must lie among a group of circumstances, we should be justified in concluding that each of these circumstances must be an invariable antecedent (or consequent).

It is doubtful whether Mill is here faithful to the pre-suppositions of his exposition. If *A* is part of the cause of *a*, *a* must be relevantly complex. If *A* is not part of the cause of *a*, the consequents, as well as the antecedents, of the positive instances must agree in more than one circumstance.

¹ III, viii, §3.

² III, viii, §2.

of Agreement is more practicable. And when we ask what leads Mill to discriminate in just this way, to relax the canon of the Method of Agreement but to enforce the canon of the Method of Difference, we find that the considerations by which he is influenced are important. It is true that the two Methods differ in this respect, that some applications of the Method of Difference yield more reliable conclusions than do any applications of the Method of Agreement. But the reason is that the premises of the former are more reliable than the premises of the latter.¹ To know that certain circumstances are the only ones in which two or more instances agree you must know the instances exhaustively. But to know that certain circumstances are the only ones in which a positive and a negative instance differ you may need to know exhaustively only what change occurs at a certain moment. The Method of Agreement requires at least two vehicles. The Method of Difference requires only one.² And the nature of this one, in so far as it undergoes no change, is irrelevant. We eliminate successfully without needing to know what we are eliminating.

(To be concluded)

¹ Cf. Joseph, *An Introduction to Logic*, pp. 498-499.

² Cf. Johnson, *Logic*, II, x, §14; Venn, *Empirical Logic*, X, vii.

II.—SOME OBSERVATIONS ON NATURAL RIGHTS AND THE GENERAL WILL (I).

BY H. D. LEWIS.

1.

THE present paper is primarily an attempt to emphasise certain distinctions which seem important for the treatment of the closely connected questions of natural rights and the 'general will'. As part of this task I shall endeavour to define the issue between realism and idealism with regard to this point. And in dealing with the latter, in the second and more substantial half of my paper, it will be contended that idealist ethics consist essentially in an attempt to reconcile the objectivity and universality of morality with certain tenets of the individualism to which the idealists themselves profess such hostility. And, having criticised idealism from this view-point, I shall be left, finally, with the task of indicating where, in my view, the real faults of individualism lie.

It will be clear that the argument covers a wide field. The topics I discuss cannot be treated fairly if they are isolated. Moreover, some account of positions already familiar to all students of philosophy proves unavoidable. But one is warranted in making one's references in such cases brief and dogmatic, and in the statement of my own view no attempt is made to be exhaustive or conclusive. Although I am led to a certain conclusion myself, my main concern is to bring together within a short space certain points significant for the problem of rights, though they are not offered as features of a full argument.

2.

It is convenient to begin with a reference to Hobbes, although the position represented by Locke is more central to my discussion, especially in the first half of my essay and in its concluding stages. With Hobbes, natural rights are the rights men have outside, or independently of, the State and, with him, these reduce to mere powers, the power of every man to get "all he can get". Within

the civil State also rights remain mere powers, but the application of the term 'right' is not without meaning here. It marks off certain kinds of powers, *i.e.*, those recognised or permitted by the law. And, up to a point, Hobbes' instinct is sound, because an important set of rights is constituted by the agreement of members of a society, whether that society be the State or some lesser body within the State. But, with Hobbes, the term right does not at any point acquire a truly moral significance and it is in a moral reference that we find the true meaning of this term. There are, indeed, striking resemblances between conceptions which are not strictly moral and this essentially moral conception. This accounts for, and, presumably, justifies, the use of the same term in all these cases, as when, for instance, we speak of a legal right as well as a moral right. But to get at the heart of the problem of rights we have always to bear in mind that the terms 'right' and 'wrong' are terms which find their first, most important and most unambiguous meaning in a moral reference. I take it as beyond dispute that, like the other terms 'ought' and 'duty', they require to be distinguished carefully from terms that refer to mere matters of fact.

And Locke has the merit of having rescued the notion of right from the level of mere matters of fact into which it had been degraded by Hobbes. He did not realise the full implication of his attitude. The affinity between the notions of right and duty was not always clear to him, and this inadvertence characterises especially the writings of some of his followers, for whom the sphere of rights and the sphere of duties are very different. This I shall explain more fully below. But although I admit that Locke is open to criticism on this score he seems to me on much safer ground than many of his critics. They overlook the fact that Locke's theory is faulty, not so much because he did not grasp the truth that right is a moral term, but because his account of what in particular are our duties is defective. And in their reaction against his views generally, critics have thrown out that which is especially true in Locke's views, and have set up a theory which, while it purports to come to the defence of morality and the moral meaning of rights, is really non-moral or naturalistic. There is an important truth in Locke's view which is consistently ignored by the counter-theories. Let me now make my meaning clearer by looking at the matter more closely.

Locke holds that persons living in a state of nature, as conceived by him, have rights. To these latter he gives the name 'natural rights'. But they are not rights which belong exclusively to persons in the 'state of nature'. They are not

annihilated by the creation of civil society, as was the case in Hobbes' view for the most part. On the contrary civil society, or the State, finds its sole justification in supporting or defending these rights. The use of the term *natural* right then does not imply restriction to the 'state of nature'. But provided we bear this in mind we shall find that most that is important in Locke's theory turns upon his view that members of the state of nature have rights which are not substantially affected by the creation of civil society. We need not be perturbed by the inconsistencies of the notion of a state of nature. As it is now commonplace to note, the theories of seventeenth century thinkers contain important principles which are not affected by the form or mould into which they are cast. And, in the present context, what is significant in Locke's view is the belief that rights are logically prior to, or independent of, civil society. They provide the rationale of civil society; they constitute the basis of its authority and define its limits. Legal rights are thus tested in the last resort by reference to natural rights. This finds particularly emphatic statement in Locke, and even his critics admit that there is an important truth here; e.g., up to this point Green gives a similar account of natural rights, except for the artificial form into which Locke's theory is cast. Thus he writes:¹ "There is a system of rights and obligations *which should be maintained by law*, whether it is so or not, and which may properly be called 'natural' . . . because necessary to the end which it is the vocation of human society to realise." Moreover, the term right is used by Locke, as stressed above, in the true sense which distinguishes it from mere powers or matters of fact. It is true that Locke often uses the word 'power' where it is clear from the context that he means right, but no careful reader is misled by this careless use of words. And even A. R. Lord, who has little sympathy with Locke, pays him this tribute.² "Where Hobbes expounds the fact of self-preservation, limited by the power of the individual, Locke can speak of reason using the term 'ought'."

In respect of his use of the term 'right', then, and his insistence that real rights (as contrasted with mere legal rights) are independent of the State, Locke will find few critics.

But when we consider what further Locke can tell us about these rights we find that it is very little. As the critics have pointed out especially, Locke only asserts that persons have

¹ *Principles of Political Obligation*. Lecture 1, section 9.

² *Principles of Politics*, p. 212.

certain rights. He gives no justification of them. He does not attempt to derive them from something else. And for this, Lord, in particular, censures him. But Green and Ritchie are among the eminent writers who have put forward a similar criticism. A quotation from Lord aptly summarises their view. Discussing Locke's account of property he declares, "it cannot be allowed that his account amounts to more than a bare *assertion* of the right, for all these ways of appropriation presuppose the right of property. They do not prove it . . . The right in general is merely asserted or assumed by Locke as existing in the state of nature."

But it is precisely in respect of this point for which Lord criticises Locke that his theory seems to me sound and important, although I consider it necessary to introduce extensive modifications. Rights, in the last resort, can only be asserted.¹ Ultimately they do not admit of justification although they may be found to have a *principle of unity* in terms of which they may be systematised. Let us first, however, look at the attempts to provide a justification for rights. Usually this attempt takes the form of insisting that rights are derived from society. Such, *e.g.*, is the view of Lord, Green, Ritchie, Bradley, Bosanquet, and a host of others.

3.

Now this expression 'derived from society' may mean a number of things, some true, some false. And those who bring it forward are rarely careful to analyse its various meanings. Hence it is that the theory finds such general acceptance. It contains certain truths which few would deny. And, in virtue of these, thinkers have been too prone to accept, without careful inquiry, the other elements in the complex of suggestions to which it gives rise.

There are two senses in which the statement is unquestionably true.

(1) Men could not have developed into intelligent beings without society. Living in comparative isolation they would not understand what is meant by right or have any notion of particular rights. And here, I think, we have a fair criticism of Locke. But, even so, we may remind ourselves that his state of nature was a state of society. Its members were not the

¹ I shall qualify this in a later reference by distinguishing between instrumental and intrinsic rights. The former can be justified by indicating their relation to the latter. But this does not affect my present contention.

mutually antagonistic units of Hobbes. But Locke, it is true, does not seem to have in mind extensive co-operation and a close-knit social life in the state of nature he envisages. The phrase 'mutual preservation' suggests some positive service of one to the other. But, it would appear, the mutual preservation only extended to the enforcement of the law of nature against offenders whenever, and by whomsoever, encountered. And the phrase 'good will' might only mean leaving others alone in the enjoyment of their rights. At least, Locke does not emphasise the intimate social life necessary if men are to develop into beings conscious of rights. In common with his contemporaries, he was not an historical thinker. And, presumably, he conceived of the earth as peopled at a sudden creation with persons fully civilised and having an enlightened consciousness of one another's rights. To that extent he is open to criticism. And if this is what we have in mind it is true to assert, in criticism of his theory, that rights are 'derived from society'.¹

(2) Rights, or at least those rights which we have a real interest in discussing,² arise from our relations to one another. It would be useless to consider Robinson Crusoe's rights (before the appearance of Friday) unless we think of the possibility of his being reunited to his fellows or unless we have in mind some duty to God. Thus a right of property would be meaningless. There would be no one to claim the right from him and no one against whom he would have a right. Likewise it would be absurd to say that I am within my rights in keeping to a certain side of the road if I am the only person in the country. Rights (with the above proviso) do not belong to us in the same way as the colour of our skins or the height of our bodies. And it is doubtful if anyone would seriously deny this; nor are the members of Locke's state of nature Robinson Crusoes, each taking care merely not to invade one another's island. But it is probable that Locke and his individualistic followers paid too little attention to the fact that rights, like duties, arise, for the most part,

¹ In certain references this seems to me to be present to Green's thought although not definitely distinguished from others. Thus he writes: "Only through recognition by certain men of a common interest and through the expression of that recognition in certain regulations of their dealings with each other, could morality *originate*, or any *meaning* be gained for such terms as 'ought' and 'right' and their equivalents." Paragraph 16 *Principles of Political Obligation*, cf. paragraph 113 and 115.

² I make this qualification because I am not anxious here to dispute the view that we have rights to ourselves. The obverse to our duties to ourselves would be rights. But I suspect the present usage of these moral terms to be metaphorical.

from our social relations. Their writings often leave the impression that men are clothed with rights, such as the right of property, very much after the manner in which they wear their natural garments. And here again we may put our criticism into the phrase that 'rights are derived from society', although that is hardly the best way of expressing it.

So much for the true meaning of the statement. And we may credit those who are fond of bringing it forward with having these points at least in mind among others. But we have yet to reveal a notion that is much more central in the thoughts of those who assert that rights are derived from society and which affects the problem of rights in a much more fundamental way.

4.

We find it frequently asserted that rights depend on recognition. Reference may again be made to Green, Lord and Ritchie. And the articles on rights in the various dictionaries usually take connections between rights and recognition as finally established and the basis of all useful discussion of the subject. Recently this has been called in question. See especially Ross, *Right and Good*, chap. iii. (Appendix).

It is absurd, at least, to say that rights depend on being recognised. To be recognised they must already exist. And if anyone were not convinced, we could add that the suggestion rejected here would make it possible for anything and everything to be a right. It renders rights entirely relative and arbitrary.

But it may be said, with more plausibility, that the recognition of certain objects or ends determines the nature of rights. I do not think this contention will bear examination. But first let us note what renders it plausible.

The theory does apply if we have in mind merely legal rights and certain other rights that resemble legal rights. These are ultimately powers as was stressed in the reference to Hobbes. But they are special kinds of powers. They are the powers of doing things, not by brute force but by entering into agreement with others, *i.e.*, in effect by a mutual suspension of sheer force. Thus, whatever the members of a society are agreed upon may be claimed as a right, and this is the case independently of the moral obligation to keep a promise. A gang of criminals who completely disregard or disavow morality, could still use the term 'right', and its equivalents 'may', 'is permitted', etc., with meaning, in terms of the agreements which they make because necessary for the success of their projects. To mark the

powers secured in this way, then, it is convenient to call them rights. How far this applies to our normal use of the word in connection with the ordinary affairs of our life, and the regulations of the societies to which we belong, etc., is not very clear, because the moral factor is not easily isolated. When we submit to the ruling of the president of our debating society, are we affected by the thought of the promise entered into implicitly by us in becoming members, as a moral obligation, or do we simply feel that this is the only way to proceed with a project whose morality does not interest us? What I wish to stress is that, even if the latter is the case, there is still a meaning to the term right. We have the power to interrupt the proceedings up to a point. We can refuse to sit down when the President commands us, but we have no right to do so. And this applies in particular to legal rights provided we confine ourselves strictly to legal considerations. There is a moral obligation to keep legal obligations but, *qua* legal, obligations and rights are respectively the mere powers we must surrender and those we may claim in turn ourselves, in conformity with the agreement of members of the State to enforce the decision of a person or persons they appoint. And this is just a paraphrase of Hobbes. His account is really the last word where strictly legal rights are concerned. His mistake was the failure to realise that the framing and the keeping of such rights are within the range of certain moral rights and duties which are differently constituted. And the shortcomings of Hobbes' theory in this regard were very evident to Green and his followers. They realised that, in some sense or another, there were rights which were independent of the State and from which the sovereign derived its moral as distinct from its legal supremacy. Such were Green's "powers which should be made law". But in seeking to account for these they took legal rights as their pattern. Thus they sought for some agreement which was more ultimate and fundamental than the agreement upon which the law directly depends. And in doing so, incidentally, they obscured the latter agreement, sometimes even pouring scorn upon the notion that it constituted, in any sense, the basis of the State's authority, even where they tacitly recognised it.¹ There is a sense in which the authority of law depends on the consent of the governed as a whole; and it is important to realise this, being careful, however, to remember that we are not using the word authority in its strict moral sense. The true

¹ See in particular Green's chapter, '*Will, not force, is the basis of the State*'.

criticism of the theory which bases government on consent is the insistence that this does nothing to explain its moral aspect, and, thereby, the nature and scope of its authority in the strictest or ultimate sense. But Green and others have substituted a different consent or agreement for the consent to be governed, thereby failing both to recognise, and to give a true account of, the latter, and to indicate the true, moral meaning of the authority to which law like everything else is subordinate. But our main concern at the moment is with the second and the more serious of these faults.

And having explained the origin and plausibility of the notion that rights, in the ultimate meaning of the term, depend on agreement or, to use a much vaguer but commoner term, 'recognition', the problem remains, 'Where is such recognition supposed to be found?' And here we recall the notion that rights are derived from society. The 'recognition' which is thought to constitute rights is the 'general will' of society for certain ends. The enactments of the State do not always conform to such a 'general will', and hence it is, on the present view, that the system of law is not 'all that it should be'.

This theory of the 'general will' has many forms and the treatment of it is often obscured in consequence. I propose to distinguish three main forms of the theory and to examine two of them at length. The chief aim of my comments will be to show how the individualism which I take to be involved in the attempt to provide a justification of rights, and which accommodates itself so naturally to the analogy between legal and moral rights, asserts itself in the particular forms of that attempt. The theories of the 'general will' which I wish to distinguish are the following :—

(A) General desire for common means to private ends.

(B) General desire for certain ends for their own sake. On the most representative formulations of this type of theory the general desire is supposed to carry with it recognition of the ends as communal ends.

The difference between (A) and (B) may be brought out thus. Let us suppose that a number of farmers have fields along the bank of a river. They find that all their fields are benefited if they co-operate in a scheme for dredging the river. If, in contributing to such a scheme, each is concerned mainly for his own fields we have an instance of (A). But, if each is gratified at the improvement to his neighbour's lands and considers his part of the scheme in this broader aspect, this gives us (B).

In the last analysis the distinction is not so important or

striking as appears at first sight, but I think that confusion is avoided by bearing it in mind.

(C) The desire of man as such or 'rational desire'.

(A) is quite compatible with Hobbes' views. The State would be the object of such a desire for him. And this emphasises the fact that to base rights on such a 'general will' is to deny that they are essentially moral. Very little reflection suffices to dismiss this form of the theory. A person's rights are not annihilated when the powers to which they constitute a title cease to serve ends desired by others, possibly in a purely selfish way. Nor, on the other hand, is there a moral title to everything that happens to be a common means to private ends. Rights are not co-extensive with whatever suits the convenience of all parties alike. They are, at least, more abiding, ultimate, and substantial than that. Yet this theory has had eminent adherents among those who professed to be asserting the essentially moral nature of rights. Strong traces of it are to be found in the writings of T. H. Green,¹ although the second and third views (B) and (C) are uppermost in his thought. Presumably the first view commends itself to such thinkers through failure to distinguish it carefully from the others. But its general acceptance as a moral principle is amazing. And its persistent recurrence in popular moral instruction, sermons, etc., is particularly vicious, as is instanced especially in the treatment of political questions. The impracticable nature of an isolationist policy is frequently cited in exemplification of the brotherhood of men. But the interdependence of men and nations in the complicated civilisation of modern times does not exemplify what is fundamental in the notion of brotherhood taken as a popular expression of *moral* principles. Obligations are not dependent on any return.

(B) A desire for really common ends. The theories which found rights on this conception of a 'general will' are not usually revolting to the moral consciousness because they carry with them the supposition that human beings on the whole are sublimely unselfish. This altruistic feature obscures the venom of the contention that is strictly made. Close examination shows that this theory is little better than (A). My objections are the following:—

(1) There is no 'General Will' or interest. The altruistic desires of a large number of persons seem confined to a small circle, and, when they extend beyond this, are very weak. We may be able to point to certain ends for which there is a fairly

¹ See footnote p. 450, below.

general desire. Such, I think, would be the minimising of unemployment. We may give credit to most normal persons for desiring the latter. Another such end would be the promotion of education. But one of the lessons we have learned from Green is that desires are organised, and it is hardly likely that these two ends have the same prominence in what various persons desire on the whole. When we remember that there is a great number of such ends the identity in the ends of people's desires is found to be much smaller. Furthermore, these public ends have to compete with private ends, and it may well be that the disinterested desire for the former is, in the majority of cases, subordinated to, and eclipsed by, desires for the security and well-being of the desiring person and his associates. I incline to this view.¹ This gives us a society of persons, all desiring, primarily at least, ends private to themselves and thus different. Those private ends may be very similar. *A* may desire to maintain his family, and *B* may desire to maintain his family, but they do not therefore desire the same end. Green failed to make this distinction clear to himself, and this probably accounts in a large measure for his readiness to affirm the existence of a 'general will'. For his view to be true, all the members of a State would have to desire the welfare of all, no one having more regard for himself than for others. Such altruism is incredible, although I consider it possible for men to make their *conduct* impartial in the exercise of free will, whatever their desires.

(2) Even though we fail to establish the 'general will' in the present sense, it does not seem that rights are affected. And if this belief is true, rights are independent of such a 'general will'.

(3) Even if there is a general desire for common objects there are, beyond doubt, exceptions who do not share it. Such are all malefactors. But it is in dealing with such persons that the *authority* which the action of the State involves is seen most clearly.

(4) To be consistent, the advocate of the present view would have to admit that, whenever a number of people desire the same end, the fulfilment of such ends is a right. But this would give chaotic and quite absurd results in a moral reference.

(5) Ultimately this view is identical with the theory of consent, which its advocates criticise so resolutely, and with (A) above. It differs from (A) only by something accidental, the fact that we happen to have extensive altruistic desires (*i.e.*, on its sup-

¹ The sacrifices of men during the war are, I think, misleadingly quoted in illustration of widespread unselfishness. Many factors besides patriotism operate on men during a war.

positions). It is not, indeed, asserted that the State has authority solely because all consent to be ruled. But we are told something identical in principle, namely, that the authority of the State over a person depends on its being a means to something he wants. And to make rights wait, in this way, upon desires is to flout the moral consciousness.

Confronted with difficulties of this kind, the advocates of the theory of the 'general will' usually resort to the notion of rational desire or rational recognition. And this version of the theory usually holds the field in recent expositions of it. At the same time it is rare for the two positions to be clearly distinguished, and, as I shall contend later, one of the main difficulties which confronts anyone who wishes to comment on the theory of the 'general will' is the difficulty of deciding the relation between the 'actual' and the 'ideal' contemplated in particular versions of it. And the earlier treatments of the topic are particularly affected by this difficulty because neither view can be said to predominate. Before proceeding to the views which find their clue to the solution of moral problems in the notion of 'rational' desire or will, I wish, therefore, to illustrate the confusion noticed here, by a reference to certain passages in Green's *Principles of Political Obligation*. This will give opportunity also of showing how the difficulties in the notion of an actual desire for common ends force the writer back upon the idea of 'rationality'.

5.

As evidence of Green's tendency to base rights, and the authority of the State as the means of preserving them, on actual interests note the following statements which are typical of many others.¹ "There can be no right without a consciousness of common interest on the part of members of a society. Without this there might be certain powers on the part of individuals but no recognition of the powers by others as powers of which they allow the exercise, nor any claim to such recognition; and without this recognition or claim to recognition there can be no right" (31).² "But in truth it is only as members of a society, as recognising common interests and objects, that individuals come to have these attributes and rights" (99)—"powers of

¹ Any form of the theory of the 'general will' requires some reference to actual interests and is, moreover, usually regarded as presupposing some interest of one in others. But the present passages are quoted as implying that the 'general will' is fully actual.

² References in this section are to paragraphs in the *Principles of Political Obligation*.

action, acquisition, and self-development, on the part of the members of the society, which there is always a general desire to extend (though the desire may not be enlightened as to the best means to the end) and which it is the business of the law to sustain and extend" (94)—"a common desire for certain ends—specially the 'pax vitaeque securitas', to which the observance of law or established usage also contributes" (84). "It is on a relation to a society, to other men recognising a common good, that the individual's rights depend, as much as the gravity of a body depends on relations to other bodies" (99). The metaphor in the last quotation in particular suggests a dependence on actual interests.

A similar interpretation seems required when we are told of instances where "the general interest in the maintenance of equal rights has lost its hold on the people" (93). It is only an actual interest that can fluctuate in this way.

Furthermore, Green seems sometimes¹ more concerned with the power which lies in the wishes of the people than with the authority so constituted. And he notes that it is only by respecting their interests, in some measure at least, that 'habitual obedience' can be secured. "When the idea of coercive force is that predominantly associated with the law-imposing and law-enforcing power, then either a disruption of the State or a change in the sources of sovereignty must sooner or later take place" (93). It is impossible to rule in the teeth of a people. And, referring to the notoriously despotic government of the Czar, Green declares that "its coercive power, if put to the test as a coercive power, would probably be found far from absolute" (90). Now the attention Green gives to this point tempts us to conclude that the general interest of which we are told is only the ultimate power in a community. In political writings that power is frequently called the ultimate political sovereign.² It has diverse elements, some good, some bad. But to designate that which is essentially power a sovereign in any sense seems to me particularly perverse and misleading. Sovereignty implies authority. Under cover of this misleading term particularly vague theories of a 'general will' as the basis of authority have been advanced. Its sole plausibility consists in the fact that the power depends largely on unity of interest. But that interest might very well be an interest in a common means to selfish ends and thus only a special form of power. It is com-

¹ In particular when beginning the chapter on *Sovereignty and the General Will*.

² Cf. Ritchie, *Essay on Sovereignty in Darwin and Hegel*.

patible with the views of Hobbes who, indeed, recognises the 'ultimate political sovereign' by discussing the means of avoiding rebellion. If we are to speak of a general will in connection with 'authority', then, we must be careful to distinguish it from the so-called 'political sovereign'. And one sentence which is often quoted from Green's writings strongly suggests that he has fallen into the confusion deplored here. It asserts that the 'sovereign power' "can no longer be said to reside in a determinate person or persons, but in that *impalpable congeries of the hopes and fears of a people*,¹ bound together by common interests and sympathy, which we call the general will" (86). On the whole, however, I think Green is much less guilty of confusing 'right' with 'might' in this particular way than some of his followers who quote him carelessly. The emphasis on 'habitual obedience' on the one hand, and 'unlimited power' on the other, may be excessive and out of place in a discussion of rights. But we should remember that it appears in a context² where Green is less concerned to advance his own view than to show how that which seems to be sheer exercise of force is often actually limited by the ends of certain common interests. He is not explaining right but trying to prove that it is more extensive than we think. Furthermore, he expressly declares in the same chapter that "a majority of citizens can be conceived as exercising a supreme coercive power, but a general will, in the sense of an unselfish interest in the common good which in various degrees actuates men in their dealings with each other, cannot be so conceived" (98). Nevertheless, to the extent that it can be correlated with habitual obedience as its determinant and the condition of the exercise of power, the 'general will' must represent an actual interest. The word 'actuates' in the sentence just quoted, and the qualification 'in some degree', have a similar implication.

Then, again, Green considers how far the general will can be maintained without "active participation of the people in legislative functions" (119). And in this reference, furthermore, he speaks of a 'civil sense' and 'active interest of the citizen in the common weal', and we are told in a later chapter that "a conception does not float in the air. It must be somebody's conception" (120).

Finally, Green himself is sensitive to the difficulties involved in the notion that rights are founded on a 'general will' as actual interests of members of the community. Let me notice some of the ways in which he endeavours to meet these difficulties as

¹ Italics mine.

² Sections 94 and about. *Principles of Political Obligation*.

further evidence of the view I ascribe to him in his writings. They will also bring out the way Green is compelled to retire upon the notion of rational desire. And they have special interest as anticipations of the attitude adopted by later thinkers.

(1) Green asserts that the 'general will' need not be interested in the maintenance of a particular government or associated explicitly with the State or 'anything that the State represents to him' (121), *i.e.*, the 'ordinary citizen' (121). Neither, as we have seen, is there any guarantee that a majority vote represents it. And thus it is necessary to point to some other general and unselfish interest in objects which the State promotes, whether or not its service is acknowledged. Where is that interest found? Pressed in this way Green replies, with delightful evasiveness, in the following passage: "The ordinary citizen" "has a clear understanding of certain interests and rights common to himself with his neighbours, if only such as consist in getting his wages paid at the end of the week, in getting his money's worth at the shop, in the inviolability of his own person and that of his wife. Habitually and instinctively, *i.e.*, without asking the reason why, he regards the claim which in these respects he makes for himself as conditional upon his recognising a like claim in others and thus as in the proper sense a right—a claim of which the essence lies in its being common to himself with others"¹ (121). Here the issue is shelved by drawing our attention to 'rights' and 'claims' rather than 'interests'. An insistence on the objectivity and universality of rights is substituted for the 'interest of one in the welfare of another' which the argument requires. In acknowledging the problem Green implies that the interests on which his theory is founded are real and actual, but his solution is a foretaste of a quite different view which he also holds, namely, the view that rights are independent of any particular reactions.

(2) Sometimes Green resorts to a subterfuge to save his theory. This is the case in his treatment of the right of a citizen to harbour runaway slaves when that is prohibited by law. Owing to the 'special private interests' which 'slavery breeds' the citizen may not "recognise action on the slave's behalf as contributory to a common good" (146). Yet Green insists emphatically that the right of the citizen is not thereby affected. We are told that "the needful recognition is at any rate forthcoming from the slave, and from all those acquainted with the action in whom the

¹ Incidentally this passage suggests that interests are common only in the sense of having similar objects. As such they need not share the unselfishness which Green ascribes to the general will and could be admitted by Hobbes.

idea of a good common to each man with others operates freely" (146). But surely, if recognition explains anything in this connection, if there is any need for it, it must be some recognition, if not by the person from whom the right is claimed,¹ at least by some persons besides the slave on whose behalf the claim is made. Green is resorting to a trick to save appearances at a point where he has to admit in effect that his theory has broken down.

(3) A curious reply to the same problem is offered in other parts of the same chapter. We are told that there may be a duty to do something, although there is no right to do it. "It would have been impossible, *e.g.*, in an ancient State, where the symbol of social union was some local worship, for a monotheistic reformer to claim a right to attempt the subversion of that worship. If a duty to do so had suggested itself, consciousness of the duty could never have expressed itself in the form of a claim of right, in the absence of any public interest in the religious revolution to which the claim could be addressed" (143).² In an earlier chapter the same view is stated more explicitly. Green is discussing cases "where the legal authority of the supposed command is doubtful" (101). "It may be impossible to decide between the claims of two authorities. In that case 'right' is in suspense on the particular point at issue between the conflicting powers" (103). "But it does not follow . . . that there is not a good and an evil, a better and worse on one side or the other" (104). "There may be clear ground for saying, in regard to any conflict, that one side, rather than the other, ought to have been taken, not because those on one side were, those on the other were not, entitled to say that they had a right to act as they did, but because the common good of a nation or mankind was clearly promoted by one line of action, not by the other" (104). It is extremely confusing to assert in this way that there may be a duty but no right. And very grave perplexities will arise where rights and duties conflict, as is quite conceivable, when, as thus, a different account is given of them. How such conflict is to be resolved I cannot imagine, although I presume, from the passages quoted, that Green holds the claim of duty to be the stronger.

¹ Cf. Green's statements in the Prolegomena, p. 206, "Persons to whom the good is conceived as common; towards whom and between whom accordingly obligations are understood to exist."

² The words 'to claim a right' or to 'address' it are confusing here. It would probably be impossible to make an effective claim, to draw any response. In the context, however, Green is discussing rights themselves, and the statement must be interpreted in that way.

Green realised that rights and duties were not wholly independent. He did good service to political philosophy in insisting on this truth. But he misrepresented it in asserting that right is merely 'relative' to duty. Section 10 *Principles of Political Obligation* is very important in this connection. Here it is maintained that "Jus naturae, thus understood, is at once distinguished from the sphere of moral duty and relative to it". Green is here preoccupied with his belief that duty depends on the motive, especially the motive of duty. And he disregards entirely the particular objects willed. It is not possible for him, therefore, to give an account of rights in terms of such objects. He is thus led to regard rights as wholly other than duties and related to them only as their condition or means. Under the influence of this belief he is sometimes led, as the above instances testify, to give an account of rights which is not only different from, but incompatible with, duty. It is true that the conditions of moral goodness are among the main ends which the State or the individual should promote, but that is only because it is one of the main specific requirements of duty. The true view, I take it, is not that rights are 'relative to the sphere of moral duty', but that they are the same thing as our duties looked at from another side. Failure to bear this in mind has proved the source of considerable confusion in the treatment of these topics.

(4) Green's supreme manoeuvre is to shift his ground surreptitiously. Dubious qualifications are introduced. And here we come to the third form of the theory of the 'general will'. In Section 118 *P.P.O.* we are told that the enforcement of law is justified if it "represents an idea of common good, which each member of society can make his own, *so far as he is rational*". "Rational recognition" is spoken of in Section 117 and the 'General Will' is described in Section 92 as "a universal rational will", exercising a 'power' over the 'inclinations of individuals'.

Where this change occurs the 'recognition' is frequently described as referring to powers and capacities, and not to objects or ends. A man may recognise the capacities of others without implying that he is in any sense prepared to encourage their fulfilment. The word 'recognition' is therefore more appropriate in such a reference, and its more consistent use shows that Green is surrendering the strict and literal interpretation of the terms 'will' and 'interest' as used in his theory.

It is in the chapter, "Has the citizen rights against the State", that this change is made most explicitly. The rights of slaves present Green with a particularly difficult problem. He insists passionately that there are such rights. On the other hand, he

is compelled to admit that slave-owning communities do not recognise them, or rate the good of the slave as their own, in any practical sense. Accordingly, Green rests his case on the consideration that the slaves could not serve the owners and live amongst them without giving evidence of capacities for life as normal members of society and a power of making as good use of freedom as their masters. The common consciousness of a capacity for a certain kind of life is here substituted for the 'mutual interest' to which Green normally refers us. And both these capacities and our consciousness of them are grounded in a common rational nature.

And having seen how the notion of 'rational nature' is substituted, in the face of certain difficulties, for the notion of an actual 'general will', to which the author seems normally to adhere, it remains to examine the conception of 'rational desire' or 'rational will'. This will occupy me, for the most part, in the next article, but without restricting myself to the view of Green. And it will be contended that the confusion between the ideal and the actual persists in this most plausible form of the doctrine of the 'general will'.

(To be concluded)

III.—THE UNITY OF THE BERKELEIAN PHILOSOPHY.

A REPLY TO MR. LUCE.

BY JOHN WILD.

SINCE the time of Fraser modern interpreters of Berkeley have commonly assumed an irreconcilable antithesis between the *Siris* and the early writings. Absorbed in his study of ancient authors at Cloyne, the Bishop is supposed to have abandoned the more hard-headed "empiricism" of his youth and suddenly turned "Platonist". So widespread has this view become, supported as it is by the weight of Fraser's authority, that it often appears as an unquestioned datum accepted without criticism. The time is thus ripe for an unbiassed examination of what has really become an inherited prejudice. This task has recently been undertaken by Mr. A. A. Luce in his two articles on "The Unity of the Berkeleyian Philosophy"¹ with surprising results.

Not only does Mr. Luce find the common assumption of divergence between Berkeley's early and late views to be thoughtlessly reiterated and exaggerated, but he fails to find a shred of evidence for any change or development of Berkeley's thought at all. The Bishop may have applied his central conception to different fields in successive publications, but no essential modification or deepening of this central conception ever occurred. What has been termed Berkeley's "development" consisted "only in seeing wider applications of that early philosophy which he never abandoned, never outgrew, and never changed".² Throughout all of the writings, it is simply the position of the *Principles* which is reiterated and defended without essential transformation. "Through a series of books, written over a period of thirty-five years with various aims and motives, one single thread runs; and that is the philosophy of Berkeley's early years, the philosophy of the *Principles*. . . ."³ The

¹ I., MIND, Vol. XLVI, N.S., No. 181, p. 44; and II., *ibid.*, No. 182, p. 180.

² I., p. 44.

³ II., p. 182.

republishing during Berkeley's lifetime of this work in 1734, of a vindication of the *New Theory of Vision* in 1733, and of the *De Motu* in the *Miscellany* of 1752 are regarded by Mr. Luce as conclusive evidence for the "solidarity of his literary life-work".¹ The Bishop's later writings, including the *Siris*, contain no evidence of any recantation, or even re-orientation of his first position.

We are thus confronted with two radically conflicting theories. Mr. Luce, I believe, is quite correct in rejecting the first. No sudden "conversion" seems to have marked Berkeley's life. No explicit retraction is to be found in his public statements. That there is "not one Berkeley, then, but several",² that the Berkeleian philosophy is a chaos of conflicting positions bound together by no unity of purpose or direction, must certainly be dismissed as an irresponsible vagary of interpretation, if, indeed, anyone has ever maintained such a view. Is the destruction of this straw man, however, equivalent to the demonstration of Mr. Luce's own thesis? We may reject a "Protean" view of Berkeley's development, and still regard him as a living man struggling constantly for a deeper apprehension of the truth, rather than as an "author", finally crystallised at the age of twenty-five, anxiously engaged during the remainder of his career in a series of literary repetitions and defences of a previously stated "position". The *Commonplace Book*, which gives us an intimate glimpse of the inner workings of Berkeley's thought, certainly provides little ground for such an interpretation. It is full of self-criticism, hesitancy, and downright contradiction. In one proposition, for example,³ he says, "It seems to me that we have no certainty about ideas, but only about words". In a marginal comment, however, immediately following, he says, "This seems wrong. Certainty, real certainty is of sensible ideas." This is only one instance among many. In an earlier passage, he says, "I do not adhere to any opinion because it is an old one, a received one, a fashionable one, or one that I have spent much time in the study and cultivation of",⁴ and the manifold twistings and turnings of the *Commonplace Book* bear witness to the truth of this assertion. Can we then believe that all these doubts and difficulties were finally resolved in the *Principles*, at the age of twenty-five, and that from this time on Berkeley was content merely to apply and defend his "system"?

¹ I, p. 46.

² A view attributed to me by Mr. T. E. Jessop in his review of my book, *George Berkeley*, MIND, Vol. XLVI, No. 182, p. 233.

³ Berkeley's *Commonplace Book*, ed. Johnston, p. 743.

⁴ p. 464.

The dogmatic tone in which the *Principles* is set forth as "a truth that is capable of demonstration",¹ as "throughout clear and obvious",² and finally as "newly known",³ might well lead to such a conclusion. But when we contrast with this the hesitant style of the *Siris*, put forth as a series of "hints to awaken and exercise the inquisitive reader",⁴ traced "through remote inferences",⁵ and back to "hoary maxims",⁶ brought to light by the great authors of antiquity, the conclusion seems more dubious. Berkeley, in the *Siris*, no longer appears as one who has discovered a new and obvious truth. He is content to interpret the words of the classic philosophers, particularly Plato, whose name is not even mentioned in the *Principles*, and of whose "lofty strain" he speaks disparagingly in the *Commonplace Book*. These differences in tone and manner are associated with equally important differences in doctrine. Thus the disparagement of the senses, which runs through the later portions of the *Siris*, has struck modern commentators, from Fraser on, as definitely at odds with the sensualism of the early writings. Mr. Luce, however, is not impressed by this apparent abandonment of the *esse est percipi* principle. "His doctrine of the sensible world is unchanged; his terminology is slightly altered."⁷ The doctrine of the *Siris* is merely that of the *Principles* in another guise.

To prove this startling assertion Mr. Luce has constructed a concordance to show the recurrence of similar phrases throughout Berkeley's works. He concludes that with regard to such "topics" as "the non-existence of matter", "the trustworthiness of the senses", etc., "the doctrines of the *Principles* coincide with the doctrines of the later works".⁸ This statement is supported simply by a list of citations selected from a great variety of Berkeley's works, including the *Principles* and the *Siris*. No effort is made to determine the *real sense* of each topic, nor whether it is maintained by Berkeley in the same sense in the *Principles* as in the *Siris*. It is, of course, impossible within the limits of a paper such as this to examine the *meaning* of the eighteen "doctrines of primary importance" listed by Mr. Luce as constituting Berkeley's unchanged and essential position. What I propose to do is to select three of these for critical consideration. In each case, I think it can be shown that the passages cited by Mr. Luce himself, when read with some regard to their *meaning*, in the light of their contexts, bear a *significance* in the *Siris* very different from that which they bear

¹ Preface. All references are to Berkeley's *Complete Works*, Fraser, 1901.

² *Ibid.*

³ *Ibid.*

⁴ Sec. 350.

⁵ *Ibid.*

⁶ *Ibid.*

⁷ II., p. 187.

⁸ II., p. 180.

in the *Principles*. I think it can be shown further that in spite of such difference and even opposition, there is a *sense* in which the "doctrine" of the *Principles* still remains true. Such critical examination will reveal a deepening and refining of Berkeley's thought, not mere "inconsistency"; growth or development rather than random change. The simple psychological subjectivism of his early works is abandoned. Here I must disagree radically with the conclusions of Mr. Luce. But the transition is completed by the sharpening and emphasising of structures already implicit in Berkeley's early thought. To hold that the "doctrine" of a philosopher develops and deepens in this sense is simply to say that he is a philosopher.

Let us begin with Mr. Luce's first "topic"—"there is no matter". The position of the *Principles* is quite clear. In Section 3, cited by Mr. Luce, Berkeley says, "the absolute existence of unthinking things, without any relation to their being perceived, that is to me perfectly unintelligible". The conclusion of the *Principles* is that the word "matter" may be applied meaningfully only to "ideas" in the mind. Matter as "inert external cause", "inert occasion", "inert instrument", "substratum", or "unknown somewhat" is in each sense simply non-existent. According to this immaterialism "the existence of Matter or bodies unperceived is the source of Atheism, Fatalism and Idolatry likewise in all its forms".¹ Let us now turn to the *Siris* where, according to Mr. Luce, we should find the same uncompromising rejection of "Matter or bodies unperceived". He cites *Siris*, Section 155, in support of this thesis. The author is here discussing that "fiery substance" which he has just identified² as "the inferior instrumental cause", actuating "this mundane system", and the "most subtle and elastic of all bodies".³ Later on, it is said to be "pure and invisible",⁴ and "the object of no sense".⁵ It is "in itself imperceptible", and "only becomes sensible as it is joined with some other principle".⁶ Yet it is "corporeal, being capable of motion, rarefaction, gravity, and other qualities of bodies".⁷ Is this that same immaterialism of the *Principles* which Berkeley "never abandoned, never outgrew and never changed"?

Yet there is still a *sense* in which the immaterialism of the *Principles* does hold true. It is not difficult to find in the *Siris* statements which assert the non-existence of matter. Mr. Luce himself cites Section 317 where Berkeley, commenting on Plato and Aristotle, says—"to them certainly it (Matter) signified no

¹ *Pr.*, Sec. 94.² 154.³ 152.⁴ 168.⁵ 175.⁶ 189.⁷ 220.

positive actual being". To anyone reading carefully Sections 311-320 of the *Siris* it is apparent that Berkeley has now re-oriented his thought with respect to the phenomena of change and permanence brought forcibly to his attention by an intensive study of Greek philosophy. The notion of matter as *potency* has thus become necessary. *In a sense* matter is. *In another sense* it is not. "Aristotle", he says, "distinguisheth a twofold existence—potential and actual. It will not therefore follow that, according to Aristotle, because a thing is, it must actually exist."¹ Nor will it follow in Berkeley's own case that because he asserts the being of a "pure and invisible" matter, he is asserting it in the naïve sense of the *Principles* as actually existent. *In a sense*, the whole polemic of the *Principles* remains true. Matter as *energeia* is non-existent. *In another sense*, however, to which he had previously been blind, it is. "Matter is actually nothing, but potentially all things."² The distinction between *dunamis* and *energeia* is implicit in the *Principles*. One cannot, indeed, speak intelligibly without employing it. But it was not sharply focussed. It played no important rôle in Berkeley's explicit doctrine, where *esse* is simply *percipi*—the actual presence of an idea. Now, however, his thought has been deepened, and his understanding of being accordingly refined. The result is no mere "inconsistency" but rather what can only be called a philosophical development.

The critical examination of Mr. Luce's other "topics" would lead to a similar sense of change and refinement of reflection. His seventh "topic" is entitled "Spirits are the only true causes".³ It is easy to find passages in the *Principles* supporting this thesis. Ideas are altogether passive and inert, being impressed on the mind by the creative action either of other spirits or of God who works directly without the interposition of any tool or instrument. Accordingly, in Sections 67-72 of the *Principles*, he sharply opposes Malebranche's occasionalism as "too extravagant to deserve a confutation".⁴ This polemic is continued with great intensity in the *Second Dialogue Between Hylas and Philonous* to which Mr. Luce himself refers.⁵ Here Berkeley radically condemns the notion of matter as a Divine instrument. "The use of a lifeless, inactive instrument", he says, is "incompatible with the infinite perfection of God."⁶ Whence "it seems a clear consequence that the supreme unlimited Agent useth no tool or instrument at all".⁷ Let us now turn to the *Siris*, concentrating on two sections which Mr. Luce himself

¹ 312.² 317.³ II., p. 183.⁴ 71.⁵ Pp. 429-434.⁶ 432.⁷ 433.

explicitly cites as evidence for his topic—"Spirits are the only true causes". Berkeley is here in the midst of the exposition of his famous fire-philosophy. In Section 154 he says this "pure æther, fire, or the substance of light" is not the "Mind that governs and actuates this mundane system", but "the inferior instrumental cause". It is further referred to, in 155, as "a mean or instrument", and, in 161, as "an instrumental cause" which receives "the impressions of the First Mover, and communicates them to the gross sensible parts of this world". Other commentators have been struck by this "inconsistency".¹ In any case, we have something other than "that early philosophy" which Berkeley "never abandoned, never outgrew and never changed".

It is still possible for Berkeley to say, as he does say, that *strictly speaking*, spirits are the only causes. "Force or power, strictly speaking, is in the Agent alone who imparts an *equivocal force* to the invisible elementary fire, or animal spirit of the world; and this to the ignited body or invisible flame, which *produceth* the sense of light and heat." *In a sense*, spirits are the only causes. *In another sense*, they are not. The elementary fire also possesses "an *equivocal force*". Who can fail to see that a new *distinction* has been made, with the most far-reaching consequences for Berkeley's whole philosophy of nature? The universe is no longer viewed as a society of spirits each with its own private, God-given world, but rather as a great Chain (*Siris*) of being, extending from pure potency and the lower types of inanimate being, through plants, animals, and intelligences to God. Though God alone is agent in the strict sense, the secondary links in the great chain possess a certain *equivocal* independence and a certain *equivocal* force. In this great hierarchy man occupies an unstable, middle station. Fallen or "lapsed" from his original high position, chained "down to the earth",³ he is still capable of "flight towards the sovereign good".⁴ A fall into nature and "earth", however, is impossible if nature and matter do not in any sense exist. The subjectivism and immaterialism of the *Principles* makes moral striving and Christianity meaningless. Hence the naturalism and even materialism of the *Siris*. Sensations or ideas in the mind are not denied *all* being. But *esse* is no longer identified with *percipi*. In order to focus more sharply this fundamental transformation

¹ Notably Jouvain in his *Philosophie de Berkeley*, Paris, 1920, Part II, chap. i.

² 220. My italics.

³ 302.

⁴ *Ibid.*

in Berkeley's conception of being, let us turn to the fifteenth of Mr. Luce's "topics",—"the senses are trustworthy".

It is, of course, not difficult to find statements of this sort in the early writings. The youthful author of the *Commonplace Book* glories in the senses and the indubitable knowledge they give him. "Certainty", he says, "real certainty, is of sensible ideas."¹ Throughout this period, Berkeley stresses the agreement of his view with the plain common sense of mankind. In the *Principles*² he says, "that what I see, hear, and feel doth exist, that is to say is perceived by me, I no more doubt than I do of my own being", and a little further, "we are not for having any man turn sceptic and disbelieve his senses; on the contrary, we give them all the stress and assurance imaginable". There is no point in multiplying examples of this sort. For the *Principles*, *esse est percipi*. Not only is this principle not stated in the *Siris*, it is flatly contradicted by the whole tone and tenor of the work. Mr. Luce refers specifically to *Siris* 303-305 in support of his thesis. Let us read the beginning of Section 304, where Berkeley writes, commenting upon Plato, "There is properly no knowledge, but only opinion concerning things sensible and perishing; not because they are naturally abstruse and involved in darkness, but because their nature and *existence* are uncertain, ever-fleeting and changing. Or rather because in strict truth they do not *exist* at all. . . ."³ This is supposed by Mr. Luce to illustrate the thesis that "the senses are trustworthy",⁴ one of the "doctrines of primary importance" belonging to "that early philosophy which he (Berkeley) never abandoned, never outgrew, and never changed". What it really illustrates is the complete transformation of the *esse percipi* principle. The *percipi* which was before boldly asserted to be *esse* is now "in strict truth" not *esse* at all. Being is not to be found in the senses and their "ever fluent and changing objects",⁵ but rather in "a form or species that is neither generated nor destroyed, unchangeable, invisible, and altogether imperceptible to sense. . . ."⁶ The feeling for time and change and the effort to grasp their significance, almost wholly absent from his early writings, but forced upon his attention by the progress of his own reflection, as well as by his study of Aristotle and Plato, have now become the dominant factors in Berkeley's philosophising.

When Mr. Luce says,⁷ "His doctrine of the sensible world is unchanged; his terminology slightly altered" one may in a sense agree, for the transformation is deeper than any mere

¹ 744.² Sec 40.³ My italics.⁴ II., p. 184.⁵ Sec. 306.⁶ *Ibid.*⁷ Sec. 187.

change in "doctrine". It is the sort of philosophical change which affects the way in which "doctrine" is held, since it affects the meaning of truth and of being itself. Berkeley describes such change in the following words: ¹ "Sense at first besets and overbears the mind. The sensible appearances are all in all: our reasonings are employed about them: our desires terminate in them: we look no farther for realities or causes; till intellect begins to dawn and cast a ray on this shadowy scene. We then perceive the true principle of unity, identity, and existence. Those things that before seemed to constitute the whole of being, upon taking an intellectual view of things, prove to be but fleeting phantoms." It is not so much that new doctrines are substituted for old, as that old truths or partial truths are seen in a new light. What before seemed significant is now regarded as trivial. What was once confused and unimportant is now sharply defined and central. Such changes in emphasis and evaluation cannot, of course, be proved by any mustering up of passages. Nevertheless, I think it is possible to submit evidence decisively indicative of such change, to anyone who will seriously take the trouble to compare the underlying tone and attitude of the *Siris* with that of the early writings. Take, for instance, its attitude towards the history of philosophy.

We have already noted Berkeley's youthful scorn for "the lofty and Platonic, or subtle and scholastique strain" in the *Commonplace Book*.² It is not surprising, therefore, to find him expressing a general contempt for the past history of thought at the very beginning of his juvenile Treatise. "Upon the whole", he says, in Section 3, "I am inclined to think that by far the greater part, if not all, of those difficulties which have hitherto amused philosophers, and blocked up the way to knowledge, are entirely owing to ourselves. We have first raised a dust, and then complain we cannot see." The young author refers ³ to "those principles . . . which have introduced all that doubtfulness and uncertainty, those absurdities and contradictions into the several sects of philosophy" and dreams of a new beginning. Aristotle is cited in the *Principles* only as an object of blind, scholastic adoration,⁴ and Plato is not even mentioned. "In vain", writes the young author, "do we consult the writings of learned men, and trace the dark footsteps of antiquity."⁵

The contrast to this youthful spirit of independence afforded by the *Siris*, with its burden of ancient tradition and lore, is astonishing. "The successful curiosity of the present age",

¹ Sec. 294.² 310.³ Sec. 4.⁴ *Pr.*, Introduction, Sec. 20.⁵ *Ibid.*, Sec. 24.

writes Berkeley, "in arts and experiments and new systems, is apt to elate men, and make them overlook the ancients. . . ."¹ No "novel" theory is set forth or defended against all-comers. What the *Siris* expounds is rather that understanding of being implicit in all men and thus as ancient as the race. Hence it takes the form of a running commentary on "the notions of the great men of antiquity".² Section after section is devoted to detailed interpretations of Aristotle's *Metaphysics* and *De Anima*, and in the concluding portions Plato is mentioned on almost every page. Mr. Luce states that Berkeley "nowhere accepts the Platonic ideas",³ and yet admits that "he speaks sympathetically of them".⁴ Throughout the sections to which Mr. Luce refers in this connection, Berkeley is clearly condemning "the fleeting, transient objects of sense",⁵ and recommending as *more real* "things remote from sense, invisible and intellectual, which never changing are still the same, and may therefore be said truly to exist".⁶ Even though one may question whether this is "Platonism" it is certainly not that subjectivism of the *Principles* for which *esse est percipi*.

There is, of course, no time within the limits of such a paper as this to attempt an interpretation of the obscure and indirectly suggested philosophy of the *Siris*. We must be content with one clear result of Berkeley's assimilation of the spirit of classic philosophy. This is the rejection of what we may conveniently call *subjectivism*. "All the choir of heaven and furniture of earth, in a word, all those bodies which compose the mighty frame of the world, have not any subsistence without a mind."⁷ Such is the burden of the *esse est percipi* principle. The world is "in the mind", to use the stock formula of the early works. In the *Siris*, on the other hand, the independent existence of nature is presupposed throughout. There are not many worlds, each enclosed within a finite spirit or subject, but one great chain of being (the *Siris*), in which all being (including the shadowy, subjective flux of sense) is. Thus Berkeley, in Section 190, speaking of the invisible fire which is "the source of all the operations in nature", refers clearly and unambiguously to "this whole natural world *in which* we subsist".⁸ Mr. Luce wishes to save Berkeley from the "charge" of inconsistency by chaining him permanently to a subjectivism (logically solipsism), for which the world is *in* the mind. Is it not a greater tribute, at least to his wit, that he came unambiguously to see the falsity of this

¹ Sec. 265.² Sec. 332.³ *II.*, p. 187.⁴ *Ibid.*⁵ 335.⁶ 336.⁷ *Pr.*, Sec. 6.⁸ My italics.

view, and the truth of the contrary that it is rather "we" who are "in" the world?

I am forced to conclude that Mr. Luce is very far from having proved his case. The *Siris*, when read meaningfully, turns out to be more than simply a wider application "of that early philosophy which he (Berkeley) never abandoned, never outgrew, and never changed". Does this mean that we must refuse to grant any "unity" to the Berkeleian philosophy, and dismiss it as a series of irreconcilable contradictions? I think not. The roots of the *Siris* may be traced far back into Berkeley's youth. They are already visible, for example, in the notion of "archetypes" so prominently introduced into the *Three Dialogues between Hylas and Philonous*. When read, as Berkeley himself suggests, "in the order wherein I published them" the various "contradictions" and "inconsistencies" of his works reveal a direction and thus take on significance. Berkeley's development, as Fraser perceived, is from the psychologism of Locke to the realism of Plato, from "the new philosophy" he studied so ardently at Trinity College to the *philosophia perennis* of the classic tradition. Like all true philosophy, his thought is a development or "struggle to recover the lost region of light", an "ardent thirst and endeavour after truth and intellectual ideas".¹ The attempt to chain the active and ever-critical mind of the Bishop of Cloyne to the Lockian subjectivism of his youth is like attempting to chain Kant to the Wolffian rationalism of his pre-critical writings.

There is a sense, indeed, in which it is true that Berkeley always held to his earlier doctrines. It is perfectly comprehensible why he allowed new editions of his youthful writings to appear, in spite of the maturing of his thought. No one supposes that Kant was still bound to the position of his pre-critical works because later editions of these appeared from 1793 on. There are many threads of identity between the early and the later period. Thus the polemic against *abstract ideas* plays a critical rôle in all of Berkeley's works, from the *Principles* down to the *Siris*. This in itself is enough to account for his willingness to have the youthful writings republished, in spite of those "many defects" of which he speaks in his letter to Johnson (25th Nov., 1729), and which he often attempted to correct by changes and omissions, as in the case of the second edition of the *Principles* in 1732. Berkeley's thought, taken as a whole, is neither a series of "inconsistent" positions nor the literary reiteration of one and

¹ *Siris*, Sec. 314.

the same position, but a gradual development of deepening insights which took him from Locke to Plato, from psychological subjectivism to the classic realism of the *Siris*.

Mr. Luce speaks disparagingly of the conception of "development", attributing it to "our twentieth-century point of view".¹ His first article, in fact, was written to show "how completely ignorant Berkeley himself was of the change of views attributed to him to-day".² "Development", he says, "was not known then, much less prized."³ The best answer to these assertions is to quote (with my italics) the last section of the *Siris* itself—words which conclude a life of philosophic effort: "Truth is the cry of all, but the game of a few. Certainly where it is the chief passion, it doth not give way to vulgar cares and views; nor is it contented with a little ardour in the early time of life; active perhaps to pursue but not so fit to *weigh and revise*. He that would make a real *progress* in knowledge must dedicate his age as well as youth, the later *growth* as well as first fruits, at the altar of truth.

Cujusvis est errare; nullius nisi insipientis in errore perseverare.

¹ II., p. 181.

² I., p. 44.

³ II., p. 181.

IV.—DISCUSSIONS.

TOTAL ECLIPSE OF A MEANING.

IN the July No., page 347, Dr. Ewing raises a question which calls for some comment. The issue itself might become clearer if we take the 'verification theory' as only intended for application where the meaning of a sentence is found doubtful for other than grammatical reasons. There is no sign in Mr. Ayer's book that he is interested in defects of meaning due to mere absurdities of expression. It is a logical problem, not a grammatical one, that he has exclusively in view. The grammarian, as such, naturally thinks of 'the' meaning of a sentence as something that is either present or absent in the words of the sentence itself—the sentence taken apart from the particular people who on occasion put it forward and those who try to understand it. But the logician—at least if he is a logical positivist or a pragmatist—tries to take these people into account. Sentences, as we meet with them, are spoken or written by a proposer (P) and are either understood or misunderstood by a questioner, or possible critic, (Q). Mr. Ayer is interested in the avoidance of misunderstandings between philosophers, and specially in the case where P says something that Q finds ambiguous. The sentence in question may or may not have a single definite meaning for P, while for Q the same sentence has two or more possible alternative meanings, between which he asks for a decision. Q's respectable motive in raising this point is that he takes the sentence as intended to make an assertion asking for criticism, and would like to make sure before disputing its truth that such and such an objection would be *relevant*. While any doubt on this point remains, P's intended single meaning is entirely hidden from Q. For him the sentence is, for the time, entirely devoid of criticisable meaning. Sometimes Q may suspect that there is no single meaning even for P himself. Mr. Ayer, for instance, suggests that the authors of metaphysical statements are in this position.

We have here, then, a method proposed for dealing with sentences found ambiguous by Q. Its value in the case of scientific judgments is sufficiently obvious, since scientific judgments are confessedly hypotheses on trial. The mere putting forward of any judgment as open to criticism is a way of asking for possible objections to its truth; and as long as Q is uncertain whether a given objection is relevant there is no definite assertion put before him to criticise. P's meaning of the sentence is then for Q entirely non-existent until this further information is given.

Now Mr. Ayer, like the men of science and the pragmatists, thinks that any human judgment, whether called philosophical or

not, is liable to error, and that the purpose of any inquiry into its truth is to weed out as much as we can of the errors it may be found to contain. For him therefore any claim to have reached a knowledge of Ultimate Reality involves a claim to have reached a finally unassailable position. Mr. Ayer has evidently no sympathy with this complacent state of mind. Stagnation of thought is not what he would recommend to philosophers.

No doubt actual metaphysicians do not in these times directly claim personal infallibility. A metaphysician, in writing his book, does not altogether ignore his readers, but rather seeks to convince them. One way is by insisting that Ultimate Reality (and not merely human understanding) must accept all the assumptions made by human language. They personify Ultimate Reality and imagine It as forbidding Itself ever to use a verbal self-contradiction. Mr. Ayer, on the other hand, holds that these 'Laws of Thought' are postulates, expressible only as tautologies, and therefore non-assertive. We do not, for instance, *assert* that A is A, but we ask to be allowed to take 'A' as A for the sake of some particular argument. Unfortunately, doubts about the admissible A-ness of a particular case of 'A' lie outside the mental activities of the verbalist philosophers as such. In fact, casuistry is to them an odious procedure, while to men engaged in scientific inquiry it is the essence of their work. Philosophers who continue to think that dictionaries and grammars tell us all that we ever need to know about 'the' meaning of words and sentences fail to see that such knowledge helps us not at all in clearing up doubtful issues between P and Q when these disputants already possess such common knowledge. Philosophers, as a rule, write decent grammar, and are well acquainted with dictionary meanings. It is natural enough that they should often misunderstand each other's statements; but why should we not try to find a remedy for that distressing fact?

Dr. Ewing looks at the doctrine that all statements with a meaning are verifiable and questions its truth. But when P (Mr. Ayer) puts forward this doctrine, Q's felt difficulty in accepting it can hardly by itself be taken as decisive of its untruth. Would it not be better to ask P whether such and such an objection to its truth would be relevant to P's intended meaning?

For instance, the sentence taken by itself does not tell us whether complete verifiability is intended, or something short of this. Then we might ask whether the admitted uncertainty of our processes of verification is a relevant objection or not. Mr. Ayer plainly tells us it is irrelevant. He has, in his book, abundantly and consistently shown that he speaks of verification only as a process hopelessly trying to be sufficient for the day. The dependence of human verification on 'sense experience' is one way of accounting for this lack of complete certainty in verification as a process. It would be a comfort perhaps if some more conclusive way of verifying our hypotheses could be found. Meanwhile we may as well do the best

we can with an incompletely trustworthy criterion of truth. There is even some consolation in the thought that there still remain plenty of errors that we may help to correct. The method of trying to make Q's objections relevant to P's intended meaning has something to be said for it, since it is only in the light of whatever knowledge P has of the kind of verification he himself would think sufficient in the given case that he can tell Q which objections are relevant.

We have here taken Mr. Ayer's statement (though for some reason put by Dr. Ewing in its contrapositive form) as proposing a method for use where Q finds a sentence of P's ambiguous. And a method of course implies a theory behind it. What then would be a satisfactory statement of the theory here in question? Dr. Ewing ends his article with a request to Positivists to give their reasons for thinking their theory true. I cannot answer with certainty for them, though I hope and think their view is much the same as mine. If I were asked, I should say that when we think of a meaning as existing *for someone*, and not merely in a loose way for people at large, we find that there are countless occasions where Q finds P's statement entirely devoid of meaning *for him* (Q). But then—if P is willing to help him—Q may hope to arrive at P's meaning by degrees. He may gradually find out what objections P would think relevant—*i.e.*, what objections, if admitted true, would shake P's belief in the truth of his statement. Thus a comprehensive inquiry into P's reasons for thinking his statement true—*i.e.*, of the 'verification' thought by P sufficient—would have the same effect as the slower process of weeding out one by one the irrelevant objections. The shadow which totally eclipsed P's meaning would then pass away and leave a clear meaning for Q to criticise. It might be worth while to use one of these methods in dealing with the statement that all 'metaphysical' statements are meaningless. Possibly there are some statements which are supposed by their authors to convey metaphysical truths, but for which no one can find a definite meaning. We may remember that there are some political documents, and perhaps also some religious creeds, which are constructed by the efforts of a number of different people sitting in conclave, to find a *formula* vague enough to seem harmless to all of them.

It is not necessary that the P and the Q should always be different persons. 'Every P his own Q' is a good enough principle as far as it goes, and is in fact largely used by scientific men, and indeed by all careful writers. We may remember that Darwin used often to ask himself "Now what *do* you want to say?"¹ But that need not prevent us from also making use of someone else's difficulties of interpretation. If ever two heads are better than one, it is when P and Q can be content to put their heads together. And I submit that for logical purposes we all ought to form the habit of minding our Ps and Qs.

ALFRED SIDGWICK.

¹ *Life and Letters*, p. 155.

IS PLATO'S *REPUBLIC* UTILITARIAN?

In his Inaugural Lecture on "Duty and Interest" Prof. Prichard made out a case for the view that Plato in the *Republic* maintains a utilitarian theory of the relation between right acts and their consequences. He holds that Plato accepts the sophistic principle "that it is impossible for any action to be really just, *i.e.*, a duty, unless it is for the advantage of the agent,"¹ and that he differs from the sophists only in the type of consequences which he adduces as the justification of justice. They said that no one would be just except for the sake of honour or reputation or some external reward. Plato looks to the effects of justice on the soul of the man who acts justly and finds there its defence. The most striking piece of evidence against this position is the classification of "goods" made by Glaucon at the beginning of Book II. There it is stated that some things are good in themselves, some are good both in themselves and for their consequences, and some unwelcome in themselves but accepted for their consequences. The second class is the best and in it Socrates is to show that justice is found. The only answer to this clear assertion that justice is good in itself as well as for its consequences must, I suppose, be elicited from Prof. Prichard's analysis of ἀγαθόν. "He means by a good a good to oneself, and this being so he must really be meaning by an ἀγαθόν, a source of satisfaction, or perhaps more generally a source of happiness."² Presumably, therefore, the task of Socrates, in showing that justice is good both in itself and for its consequences, is to prove that justice brings happiness to the just man and also produces other consequences (wealth or reputation?) which are good, that is productive of still more happiness for the just man. I do not think this analysis of "good" is defensible, and its application to the present passage seems incompatible with the clearness of Plato's own distinction there between means and ends.

I am therefore much more in sympathy with Mr. Foster who recognises that the threefold classification of goods is inconsistent with a utilitarian interpretation of the whole work, and who therefore regards it as a mistake of Plato's.³ Mr. Foster thinks that if we eliminate this passage (357-358) and some later phrases which recall it, the position is once again clear. Glaucon and Adimantus ask Socrates to prove that justice pays and Socrates does so. Prof. Prichard's case, falling as it does within the limits of a single lecture, is naturally made briefly and generally, and it has been

¹ *Duty and Interest*, p. 10.

² *Ib.*, p. 21.

³ "A Mistake in Plato's *Republic*," *MIND*, N.S., xlv, pp. 386 ff.

answered on general lines by Mr. C. R. Morris.¹ As I agree with Mr. Morris in his main argument, I intend in this note to meet Mr. Foster on the crucial passages both in Book II and later in the *Republic*. I believe that Plato stuck to his programme and supposed that he had shown both that justice is good in itself and that it is good for its consequences; but reading these passages in the light of Mr. Foster's article I have found their language almost always tantalisingly ambiguous and I should hesitate to claim that the text is absolutely clear or that either position is demonstrable.

I shall consider first the speeches of Glaucon and Adimantus, which I shall summarise, quoting the vital passages and lettering them for convenience of reference. After Glaucon has explained his threefold classification and Socrates has placed justice in the best class, *ὁ καὶ δι' αὐτὸ καὶ διὰ τὰ γιννόμενα ἀπ' αὐτοῦ ἀγαπητέον τῷ μέλλοντι μακαρίῳ ἔσθθαι*, Glaucon states that *οἱ πολλοί* regard it as something (a) *ἐπίπονον*, *ὁ μισθῶν θ' ἔνεκα καὶ εὐδοκμήσεων διὰ δόξαν ἐπιτηδεύεον*, *αὐτὸ δὲ δι' αὐτὸ φευκτέον ὡς ὃν χαλεπὸν* (358a). Glaucon himself will therefore restate the position of Thrasymachus in order to elicit a more adequate refutation. He continues (b) *ἐπιθυμῶ γὰρ ἀκούσαι τί τ' ἔστιν ἐκάτερον καὶ τίνα ἔχει δύναμιν αὐτὸ καθ' αὐτὸ ἐνὸν ἐν τῇ ψυχῇ*, *τοὺς δὲ μισθοὺς καὶ τὰ γιννόμενα ἀπ' αὐτῶν ἔασαι χαίρειν* (358b). Glaucon will state what justice is and show that those who serve her do so unwillingly not as good but as necessary, and that this is natural, for the unjust life is better than the just. Glaucon would like to hear justice (c) *αὐτὸ καθ' αὐτὸ ἐγκωμιαζόμενον* (358d). Endowed with the ring of Gyges any man would follow his example and pursue injustice. Therefore we must strip justice of her rewards and reputation and give them to injustice (d) *ἵνα ἀμφότεροι εἰς τὸ ἔσχατον ἐληλυθότες, ὁ μὲν δικαιοσύνης, ὁ δὲ ἀδικίας, κρίνονται ὁπότερος αὐτοῖν εὐδαιμονέστερος* (361d).

Adimantus follows up this attack. He says that parents and guardians praise justice to their children on the ground that it brings repute among men and rewards from the gods. But, he points out, these men err (like *οἱ πολλοί* in 358a) because the rewards they cite can be acquired equally well by the unjust man if he takes care to appear just to others and if he offers propitiatory sacrifices to the gods. The error lay in attacking injustice and praising justice not for themselves but for their repute. (e) *Αὐτὸ δ' ἐκάτερον τῇ αὐτοῦ δυνάμει τί δρᾷ, ἐν τῇ τοῦ ἔχοντος ψυχῇ ἐνόν, καὶ λανθάνον θεοῦς τε καὶ ἀνθρώπους, οὐδεὶς πώποτε οὐτ' ἐν ποιήσει οὐτ' ἐν ἰδίῳ λόγῳ ἐπεξῆλθεν ἱκανῶς τῷ λόγῳ ὡς τὸ μὲν μέγιστον κακῶν ὅσα ἴσχει ψυχῇ ἐν αὐτῇ, δικαιοσύνη δὲ μέγιστον ἀγαθόν* (366e). If this is true no guardian against injustice is needed, for each man would be his own best warder, (f) *δεδιῶς μὴ ἀδικῶν τῷ μεγίστῳ κακῷ σύνοικος ἢ* (367a). (g) *Μὴ οὖν ἡμῖν μόνον ἐνδείξῃ τῷ λόγῳ ὅτι δικαιοσύνη ἀδικίας κρείττων, ἀλλὰ τί ποιῶσα ἐκάτερα τὸν ἔχοντα αὐτῇ δι' αὐτὴν ἢ μὲν κακόν, ἢ δὲ ἀγαθόν ἐστίν· τὰς δὲ δόξας ἀφαίρει, ὥσπερ Γλαῦκων διεκελεύσατο* (367b).

¹ *Proceedings of the Aristotelian Society*, 1933-34.

For if you rely on these honours it is clear that you are really praising not justice but seeming-just. (h) ἐπειδὴ οὖν ὁμολόγησας τῶν μεγίστων ἀγαθῶν εἶναι δικαιοσύνην, ἃ τῶν τε ἀποβανόντων ἀπ' αὐτῶν ἕνεκα ἄξια κεκτῆσθαι, πολὺ δὲ μᾶλλον αὐτὰ αὐτῶν, οἷον ὄρᾶν, ἀκούειν, φρονεῖν, καὶ ὑγιαίνειν δὴ, καὶ ὅσ' ἄλλα ἀγαθὰ γόνιμα τῇ αὐτῶν φύσει ἀλλ' οὐ δόξῃ ἐστίν, τοῦτ' οὖν αὐτὸ ἐπαίνεσον δικαιοσύνης, ὃ αὐτὴ δι' αὐτὴν τὸν ἔχοντα ὀνύνησιν καὶ ἀδικία βλάπτει, μισθοὺς δὲ καὶ δόξας πάρες ἄλλοις ἐπαινεῖν (367c). Adimantus concludes with a repetition of 367b, the demand to be shown that justice is good and injustice bad. Then all unite in begging Socrates (i) διερευνήσασθαι τί τέ ἐστιν ἐκάτερον καὶ περὶ τῆς ὠφελείας αὐτοῖν ἀληθὲς ποτέρως ἔχει (368c).

It is the view of Mr. Foster that these passages (with the exception of a few phrases which recall the unfortunate classification of goods in 357) make up an exhortation to Socrates to show that justice benefits the just man, by an appeal to its natural and inevitable consequences as contrasted with its *μισθοί* which are the rewards conventionally attached to it, such as honour or reputation. I think however that anyone reading the passages and asking about each whether it concerns justice itself or its consequences would doubt Mr. Foster's conclusion. It seems to me that (b), (c), (e), (f) and (g) are requests to be shown that justice is good in itself, and (d) and (i) that it is good for its consequences. On closer inspection (c) and (f) remain quite unequivocal, and it is surely a strain of meaning to have to interpret αὐτὸ καθ' αὐτό in (c) as "for its consequences and apart from those procured by its reputation."¹ But it is certainly true that the two questions are not clearly distinguished and also that there are ambiguities in (b), (e) and (f) in the words τίνα ἔχει δύναμιν, τί δρᾷ and τί ποιοῦσα. These would seem clearly to refer to the effects of justice on the soul of the just man. Yet in (b) they accompany a sharp rejection of consequences, not merely of the *μισθοί* (supposing Mr. Foster's interpretation of *μισθοί* to be correct) but also of τὰ γιγνόμενα ἀπ' αὐτῶν, and in (e) and (f) they accompany the strongest assertions that justice is good in itself. "A man who has justice in his soul has in his soul the greatest good, and he who has injustice has the greatest of evils." We must admit the ambiguity here. Yet if Plato had been asked whether he meant by τί δρᾷ, etc., that a man who had justice in his soul had also as its consequence something other than justice, for the sake of which alone it was worth while to be just, he would surely have rejected this interpretation. What does justice "do to the soul"? What does beauty "do to a poem"? By its presence it renders the poem beautiful. So justice "has the power" to render the soul harmonious. But its harmony is justice and not a consequence of justice.

It must further be noted that while Mr. Foster must regard all passages which suggest that justice is good in itself as mistakes and inconsistencies, I am not committed to the exactly opposite view

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and I do not have to explain away passages which claim that justice has good consequences. For the task of Socrates, on my theory, is to show that justice is in "the best class" good in itself and good for its consequences. In proving the first half of this thesis, *all* consequences must be eliminated as they are in (b), (c) and (f). In proving the second, necessary and inevitable consequences must be brought back again as they are in (d) and (i).

Mr. Foster seems to me to misrepresent both sides of the contest when he says,¹ "The original demand which Glaucon made of Socrates in terms of the threefold division of goods was that he should prove justice to be good in itself and apart from its consequences against opponents who maintained it to be bad in itself but good by reason of its consequences." But the original demand (358a) was to show that justice was good both in itself and for its consequences, and Glaucon and Adimantus are the "opponents" and their view is that justice is good for neither reason. Mr. Foster has failed to distinguish *οἱ πολλοί* of 358a and the parents of 362e from the sophists. The former hold the view that justice is *ἀναγκαῖον* for its consequences, but Glaucon with the Gyges story and Adimantus with his cynic's theology make it clear that this view is merely a muddle. Grote also, as the passage quoted by Mr. Foster shows, failed to distinguish the confusion of *οἱ πολλοί* from the clear and very different position of Glaucon and Adimantus. They are true followers of Thrasymachus in maintaining that injustice is *κρείττον* though they add that it must be accompanied by dissimulation and propitiatory sacrifice in order to obtain all the goods for which *οἱ πολλοί* held justice was *ἀναγκαῖον*. I maintain, therefore, that the programme sketched for Socrates in the two long opening speeches is not utilitarian. His main task is to show that justice is good in itself, though he is to show also that it has good consequences.

I shall now consider how the programme is carried out. Prof. Prichard and Mr. Foster again agree that the ethical argument of the *Republic* has a single aim, to show that justice pays the just man. The first question is naturally "What are the consequences of justice by which Socrates in the end commends her to us?" Prof. Prichard, as we have seen,² answers "happiness" and Mr. Foster agrees. "Socrates' defence of justice, which culminates in the ninth book, consists in the demonstration that happiness is the natural consequence of justice."³ It is true that this answer finds much support in isolated phrases in the text.⁴ But if we ask where the arguments occur which embody the demonstration, the answer must be a reference to Book IX. Yet in Book IX the consequence invoked is not happiness but pleasure. The vital arguments are introduced by the clear statement that the two lives are disputing *μὴ ὅτι πρὸς τὸ κάλλιον καὶ αἰσχρον ζῆν μὴ δὲ τὸ χεῖρον καὶ ἄμεινον, ἀλλὰ πρὸς αὐτὸ τὸ ἥδιον καὶ ἀλυπότερον* (581e). Throughout the

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argument ἡδονή and ἡδιστος are consistently used, and repeated when the results are summed up in 588a. It follows then that, if the whole ethical theory of the *Republic* is to depend on any argument that the consequences of justice are good, since the only arguments refer to pleasure as the consequence, Plato on this view is not merely a utilitarian but an egoistic hedonist.

It is also essential to the arguments of my opponents to maintain that up to Book IX no reason is alleged for the pursuit of justice. "Socrates' entire argument in favour of justice is based on an appeal to its consequences."¹ It is equally essential for me to show where in the *Republic* justice is proved to be good in itself. I find the real heart of the ethical position Plato is defending at the end of Book IV. I believe indeed that Book IX could have disappeared (as the notorious sentence in Butler's Eleventh Sermon about "justifying virtue," cited by Prof. Prichard in proof that Butler too was a utilitarian, could have disappeared) without shaking the central edifice of the ethical position at all. The vital passage must be quoted in full.

οὐκοῦν αὐδ, ἔφη, τὸ δικαιοσύνην ἐμποιοῖν τὰ ἐν τῇ ψυχῇ κατὰ φύσιν καθιστάναί κρατεῖν τε καὶ κρατεῖσθαι ὑπ' ἀλλήλων, τὸ δὲ ἀδικίαν παρὰ φύσιν ἄρχειν τε καὶ ἄρχεσθαι ἄλλο ὑπ' ἄλλου; Κομίδῃ, ἔφη. Ἀρετὴ μὲν ἄρα, ὡς ἔοικεν, ὑγίειά τέ τις ἂν εἴη καὶ κάλλος καὶ εὐεξία ψυχῆς, κακία δὲ νόσος τε καὶ αἰσχος καὶ ἀσθένεια. Ἔστιν οὕτω. Ἄρ' οὖν οὐ καὶ τὰ μὲν καλὰ ἐπιτηδεύματα εἰς ἀρετῆς κτῆσιν φέρει, τὰ δ' αἰσχροὶ εἰς κακίας; . . . Τὸ δὲ λοιπὸν ἥδη, ὡς ἔοικεν, ἡμῖν ἐστι σκέψασθαι πότερον αὐτοῖς λυσιτελεῖ δίκαιά τε πράττειν καὶ καλὰ ἐπιτηδεύειν καὶ εἶναι δίκαιον, εἴαν τε λανθάνει εἴαν τε μὴ τοιοῦτος ὢν, ἢ ἀδικεῖν τε καὶ ἀδικον εἶναι, εἴανπερ μὴ διδῶ δίκην μηδὲ βελτίων γίγνηται κολαζόμενος. Ἄλλ', ἔφη, ὦ Σώκρατες, γελοῖον ἔμοιγε φαίνεται τὸ σκέμμα γίγνεσθαι ἥδη, εἰ τοῦ μὲν σώματος τῆς φύσεως διαφθειρομένης δοκεῖ οὐ βιωτὸν εἶναι οὐδὲ μετὰ πάντων σιτίων τε καὶ ποτῶν καὶ παντὸς πλούτου καὶ πάσης ἀρχῆς, τῆς δὲ αὐτοῦ τούτου ᾧ ζῶμεν φύσεως ταραττομένης καὶ διαφθειρομένης βιωτὸν ἄρα ἔσται, εἴανπερ τις ποιῇ ὃ ἂν βουληθῇ ἄλλο πλὴν τούτου ὁπόθεν κακίας μὲν καὶ ἀδικίας ἀπαλλαγῇσεται, δικαιοσύνην δὲ καὶ ἀρετὴν κτήσεται, ἐπειδήπερ ἐφάνη γε ὄντα ἑκάτερα οἷα ἡμεῖς διεληλύθαμεν.²

We now have discovered what justice is. It is that condition of the soul in which each part performs its own function under the control of reason. Justice has that relation to the soul which health has to the body or harmony to music. We must now ask whether it pays to be just. But that is an absurd question. If life is not worth living when the body is diseased and corrupted, how much less so when that itself which is the principle of life is corrupted, even if a man got everything he wished except to avoid injustice and to win justice. Yet let us go on to consider the question.

The question remains unanswered, owing to the interruption concerning communism and education, and when it emerges again

¹ Foster, p. 388.² 444d-445b.

in Book IX it is posed in the form "Which life is the pleasantest ?" not the best or noblest.

Now health was one of the examples given in 357c of something both good in itself and good for its consequences, and the explicit and clearly developed parallel between health and justice in the passage quoted above seems to me the final piece of evidence that Plato never forgot his promise to place justice in that "best class," that he takes himself by the end of Book IV to have accomplished the first and greater part of his task, and that, as I urged above, the pleasure arguments of Book IX could have disappeared entirely without shaking the central ethical position of the *Republic* at all.

I add next two special points on Mr. Foster's article. He lays stress on his interpretation of *μισθοί*, namely, external and conventional rewards of justice such as honour or reputation, so that he can show that when Socrates is asked to eliminate the *μισθοί* of justice he can hold that the *natural* consequences are not to be eliminated but demonstrated as necessary. I am not convinced that Plato intended any such accurate usage, and in any case Glaucon asks Socrates to eliminate *τοὺς μισθοὺς καὶ τὰ γινόμενα ἀπ' αὐτῶν*, so that the point of the strict usage is lost. Plato's position seems to me exactly that which would be taken up by any Christian moralist to the proverb, "Honesty is the best policy." If this means that honesty necessarily brings certain external consequences, the trust of others or good repute or a large bank balance, then that is false. These rewards go to the man who seems honest whether in fact he is honest or not. The true solution is two-fold. Firstly, honesty is its own reward. The virtuous state of the soul which honest action expresses has intrinsic value; secondly, honesty has other rewards in the peace of mind which follows it and (he might add) in the life to come. But it does not follow that these rewards are the only or the main incentive to honesty; indeed they need not be an incentive at all. I do not believe that it was Plato's view that the philosopher pursued the truth or that the just man descended into the cave to take his turn of government, because only in this way could he get 729 times as much pleasure as he might by tyranny. Yet this is the culmination of the only set of arguments in the *Republic* which concern the consequences of justice.

Secondly, I accept Mr. Foster's translation of *γόνιμα* in 367a as "productive," not "genuine". But, as with all "consequences" passages, e.g., (d) and (i) above, that acceptance does not damage my view of the general argument. Those who, like Adam, translate it "genuine" no doubt agreed with Grote and Mr. Foster that the task set for Socrates in 357-358 was to prove only that justice is good in itself. ("He should prove justice to be good in itself and apart from its consequences."¹) As I have insisted throughout, this was only half his task. He had also to prove justice was *γόνιμος*—productive of good consequences.

¹ Foster, p. 390.

I shall end with two general considerations which I think account for and render plausible the views I am rejecting.

First, there is a natural temptation to think that when Plato speaks of justice he is thinking of just actions. Justice is "the common character of particular acts".² Prof. Prichard's interest from his own view of ethics is naturally concentrated on just or right action. No doubt action is our primary material, as it is the only available evidence we have. But for Plato "justice" means a condition of the soul and action is merely its natural expression. It is true that if a man is not perfectly just, then a just action (provided that it is the expression of the partial justice he has already acquired) will make him more just. Indeed, *pace* Prof. Prichard, this is the only good consequence of just acts in general which Plato ever explicitly mentions.³ But the ultimate reason for a just act does not lie in its consequences. Why do the philosophers leave their thinking and descend into the cave? Because some one must rule the city. But why should they do it and no one else? Because only so will the city be well ruled. But why should such considerations weigh with them when they are so happy in the outer world? Because they are just men. *Δίκαια δίκαιοις ἐπιτάξομεν*.³

The second reason for the plausibility of making Plato a utilitarian is an apparent contradiction in his initial programme. He is to prove (a) that justice is good in itself, (b) that it is good for its consequences. But (a) is a hopeless task. To prove anything is good in itself is to give a reason why it is good and that is *ipso facto* an admission that it is not good *in itself*. Anyone therefore who believes something is good in itself cannot argue; he can only affirm or testify. This is quite true and the only defence must be that Plato shows he realised it. To prove justice is good in itself he must first show what justice is. When this is clear it will be *self-evident* that it is intrinsically good. If anyone suppose that "justice" means obeying selfish tyrants or giving back borrowed pistols to madmen he may well be in doubt about its worth. But as soon as it is clear that justice is the state of the soul described in Book IV the battle is over. Analogies with health or harmony may help but they are not proofs but aids to an insight which is beyond proof. It would indeed be laughable (as Glaucon says) to ask whether justice pays when one has seen what it is. Why then raise the question in Book IX? Because our ideas of the justice of the Universe would be shaken if justice and pain were necessarily connected. We are not looking for additional incentives for being just. Still less are we looking, as Prof. Prichard and Mr. Foster interpret the *Republic*, for the only possible incentive. I believe if this view were put before Plato as an account of his argument he would reply (as indeed he does) with a scandalised *Εὐφήμεν*.⁴

J. D. MABBOTT.

¹ Prichard, p. 19.

² 444e.

³ 520e.

⁴ 509a.

PROFESSOR PATON AND "KANT'S SO-CALLED COPERNICAN REVOLUTION".

THE case for the intrinsic parallelism between Copernicus' reconstruction of astronomy and Kant's recasting of metaphysics, and the appropriateness of this analogy to Kant's own requirements has been set out so lucidly and cogently by Prof. Paton in your July issue (No. 183, pp. 365-371) that I should like to state why I am still unconvinced (1) that we should go on speaking of Kant's 'Copernican Revolution' and (2) that Kant himself read into the analogy nearly as much as Prof. Paton believes.

(1) Even granted Prof. Paton's exegesis of the crucial sentence in B xvi of the *Vorrede*, the following facts remain. Structurally the whole of the earlier part of the *Vorrede* is built up round the programme set out in the opening paragraph—namely, the methods by which a discipline is to be brought into the sure course of a science, how, that is, (to adopt Husserl's terminology) it is to be constituted a strict science. Mathematics received its 'scientific constitution' in Greek antiquity, the natural sciences at the hands of the successors of Bacon, and each of these constitutions is expressly termed a "Revolution". On the other hand, whatever Copernicus may have achieved, and whatever parallels Kant may have been conscious of between Copernicus' achievement and his own performance, Kant does not describe what Copernicus effected as a Revolution. I do not think the point is met by a fact to which Prof. Paton draws attention, namely that Kant implies that Copernicus' work was an *Umänderung*. The German word *Revolution* is as striking a word as its English equivalent, and as little synonymous with the relatively colourless *Umänderung* as is the English word "Revolution" with the English word "transformation"¹—though of course there are circumstances where, as here, the wider word could be applied to what is meant by the narrower. In these circumstances, to continue to speak of "Kant's Copernican Revolution" is to ask for misconstruction where for once there is no terminological confusion or ambiguity in Kant's own text.

(2) I admit that Prof. Paton has made out a strong case in his article for the appropriateness of the analogy in the crucial sentence of B xvi as expounded, *e.g.*, in his own recent commentary. But the absence of any terminological parallels (on this interpretation)

¹ Would he not be a bold German who dared to congratulate Herr Hitler on his *Umänderung* of Jan. 30, 1933?

between this sentence and its context remains very remarkable and unexplained, especially in view of the constant recurrence of identical terminology throughout the *Vorrede*. I venture to think that the passage which Prof. Paton adduces (on pp. 369 f.) from the paragraph on B xxii f., so far from lending support to his interpretation, bears out rather the view I suggested. The careful structure of the *Vorrede* would seem to put it beyond question that the reference to the '*Geometer und Naturforscher*' is back to the two groups which effected the previous Revolutions.

May I add a further word about the passage from Wolff which Prof. Paton seems to have found so irrelevant? Perhaps it will be worth while to state how I came upon it. As I remarked in my previous note, there appeared to me to be no adequate evidence that Kant had ever handled a copy of the *De Revolutionibus*, and on the assumption (right or wrong) that he had not, the question arose as to whence he derived his knowledge of Copernicus. It was with this problem in mind that I consulted Wolff's *Physics*. On the assumption that we are apt to have a very limited number of favourite text-books in each subject, and that upon these we are sometimes inordinately dependent—even (as perhaps Dr. Paton will allow) down to our Commentaries on the *Critique*,—it was natural to ask what, if any, were Kant's standard text-books in physics. This tendency to rely upon one or two standard books is no doubt the greater in the case of the wholly or mainly 'deductive' disciplines such as formal logic, mathematics and physics, where there is less room for expressions of opinion and the main requirement is convenience of exposition. It seemed very reasonable to suppose that if Kant had such a work he would have made it the basis of his public lectures on physics; and when I looked up the references to Copernicus in this treatise and found among them an examination of the propriety of using a hypothesis around the name of Copernicus, I felt justified in finding "confirmation" of my interpretation of B xvi.

The fact is, for Kant the name of Copernicus seems to have been closely associated with his success in hypothesis making, for at B xxii *n* it is again introduced in connection with his propounding of a hypothesis. Can this be fortuitous? This dual allusion at least suggests that for Kant Copernicus was the classical instance of a successful hypothesis-maker, and supports the view that herein is to be seen the main *tertium comparationis* of the sentence in B xvi.

I had proceeded so far, when the index to the third volume of de Vleeschauwer's treatise on Kant, which in the meantime had become available, revealed the presence of another reference to Copernicus in Kant, of the existence of which I was previously unaware. It occurs in the *Logik*, and the subject under discussion is none other than the demands of a good hypothesis. The passage is as follows :

Kant is arguing that one of the elements required for certainty in a hypothesis is 'unity'. A hypothesis, he says, should not exact the introduction of subsidiary hypotheses—otherwise it loses very much of its probability. "For the greater the number of consequences that can be derived from a particular hypothesis, the more probable it is; the less the consequences, the more improbable. Thus the hypothesis of Tycho de Brahe did not suffice to explain many phenomena. He therefore supplemented it by assuming several additional hypotheses. From this fact it is to be conjectured that the hypothesis invoked could not be the real ground. On the other hand the Copernican System is a hypothesis by means of which everything which ought to be capable of explanation by it can be so explained, in so far as our present *data* go.¹ In this case we need no subsidiary hypotheses ² (*hypotheses subsidiarias*)." (*WW.*, Berl. Akad. ed., IX, 85 f.).

The occurrence of this reference in a treatise in which historical allusions are as sparing as in Kant's other works affords in my judgement the strongest support to the view that for Kant the name of Copernicus was especially associated with his successful hypothesis-making. Incidentally it helps to bridge the interval of twenty-seven years between Kant's physics lectures and the *Vorrede*, which to Prof. Paton presented a difficulty; for the Logic Lectures were delivered over several years from 1765 onwards. At any rate, I hope that if I claim *this* passage as a confirmation of my contention, Professor Paton will not think I am adducing evidence which has "no weight at all".

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¹ *Soweit es uns bis jetzt vorgekommen ist.*

² *Hülfsypothesen.*

V.—CRITICAL NOTICES.

Wahrscheinlichkeit, Statistik, und Wahrheit. R. von Mises. Second Edition. Wien : Julius Springer, 1936. Pp. viii, 282. M. 16.

THE first edition of this work was published in 1928. It now reappears, in a considerably enlarged form, as Vol. III of the series *Schriften zur wissenschaftlichen Weltauffassung*, edited by Prof. Frank of Prague and the late Prof. Schlick of Vienna. The author is a very distinguished mathematician, formerly of Berlin and now professor at Istanbul. So far as I can discover, the first edition was not noticed in MIND. For this reason, and because the book contains an extremely clear and able statement of one form of the Frequency Theory of Probability by an acknowledged expert in the technique of the subject, I propose to review it in some detail.

The book consists of six divisions. Each is called a "lecture"; but they must have been considerably expanded from their original length. The first four of them contain the statement and explanation and defence of von Mises' theory; the other two are accounts of the application of the calculus of probability to statistics and the errors of observations and to physics. The first lecture deals with the definition of "probability", and the second with the elements of the calculus of probability. In the third von Mises considers critically alternative views to his own, and tries to deal with the arguments of opponents and the alleged improvements suggested by half-converted friends. Plainly there is some close connexion between a frequency-theory of probability and those theorems which may be grouped together under the head of "the laws of great numbers". In the fourth lecture von Mises considers carefully the meaning of these theorems and their precise relation to his frequency-definition of "probability".

The essential points in Lecture I. are the following: (i) The word "probability" may be compared, *e.g.*, with the word "work", in so far as it is undoubtedly used in many different senses in ordinary life, and it is hopeless to look for a definition of either which will both cover all these senses and mark out something capable of measurement and mathematical treatment. The proper course is to begin by attending to those regions in which the word "probability" is admittedly used in a sense in which it can be and has been made the subject of a calculus. These are games of chance, insurance, and certain mechanical and physical problems. This clear central

nucleus is surrounded by a penumbra of borderline cases, such as the credibility of witnesses. In the outer darkness, and explicitly excluded by von Mises from consideration, come such usages as the "probability" of an historical narrative, the "inner probability" of a work of art, and so on. I suppose that he would therefore exclude from consideration the "probability" of an alleged law of nature, such as the conservation of energy, and the "probability" of a scientific theory, such as Einstein's theory of gravitation or the nebular hypothesis.

(ii) We must next try to discover what is common and peculiar to the cases that fall within the clear central nucleus. According to von Mises we find two such characteristics, one fairly obvious and the other less so. (a) We have a certain clearly delimited class of observable phenomena, *e.g.*, throws with a die, which are very numerous and can be conceived to become indefinitely more numerous as time goes on. Each member of this class must manifest *some one*, and cannot manifest *more than one*, of a certain set of alternative characteristics. *E.g.*, in the case of the fall of a die, the characteristics are a 1 uppermost or a 2 uppermost or . . . a 6 uppermost. The relative frequencies with which these various alternatives have been manifested can be determined at any moment, and it is conceived that each of them would approach indefinitely nearly to a certain limiting value as the total number of observed members of the class was indefinitely increased. (b) The frequencies with which the various alternatives are manifested among the members of a class might approach to limiting values in the way described above, and yet the following situation might exist. There might be one or more general rules for choosing infinite sub-classes out of the original infinite class, such that in these selected sub-classes the limiting frequency of a given alternative would be *different from* its limiting frequency in the original class. Now the second condition is that this possibility must be ruled out. The original class must be such that the limiting frequency for any alternative is *the same* for the class as a whole and for any infinite selection from it, provided only that the question whether a given individual does or does not fall into the selected sub-class is independent of the particular alternative which *it* manifests. Von Mises refers to this second condition as the "principle of Excluded System" or the "principle of Indifference to Ordinal Selection" (*Stellungsauswahl*). We will call it "Randomness". He defines a "Collectivity" (*Kollektiv*) as any class which answers to these two conditions.

(iii) "Probability", as used by von Mises, has a meaning only in reference to collectivities. The minimum intelligible statement predicating a probability is of the form "The probability of the occurrence of alternative *a* in the collectivity C_A is *p*". And this means what is meant by the statement " C_A is a collectivity every member of which is a manifestation of some one of the alternatives $a, a', a'' \dots$; and the limiting value of the ratio of the number of

its members which manifest a to the total number of its members is p ".

If we consider a certain particular die, *e.g.*, the relevant collectivity will be the past, the present, and all the possible future throws with *that* die. With von Mises' definition it would be sensible to ask "What is the probability of throwing a 6 with *that* die?" But, so far as I can see, it would be meaningless to ask "What is the probability that I, who am now just about to throw that die, shall throw a 6 with it on this occasion?" The case of vital statistics would seem to be somewhat different, since each man can die but once. Here the collectivity might be, *e.g.*, Englishmen reaching the age of 40 during 1937, considered in respect of the two alternatives of surviving or not surviving their 41st birthday. It seems to me that the notion of a collectivity, answering to von Mises' two conditions which both involve infinity and limits, can hardly be regarded as a legitimate extrapolation from the observable class in this case, even if it can in the case of throwing a die.

Be this as it may, it would be meaningless, on von Mises' definition, to ask "What is the probability of *Mr. Smith*, who became 40 in 1937, surviving to *his* 41st birthday?" This is admitted and asserted by von Mises, but he uses an argument which is really relevant to a different point. The argument is that Mr. Smith, beside being an English *man*, is an English *human being*, is a *European human being*, and so on. Now the statistics for persons of 40 surviving to their 41st birthday are different for all these different classes, and Mr. Smith is equally a member of all of them. Why single out the statistics for one of them, *viz.*, the class of *English men*, rather than the statistics for another of them, as "the probability that Mr. Smith will survive to his 41st birthday"? If you answer that it is unreasonable to take the statistics of a less determinately delimited class when you can get those of a more determinately delimited class, why stop at the class of English men? Mr. Smith may be a Yorkshireman, an Etonian, and a Plymouth Brother, besides being an English man. If you go far in this direction, you will define a class of which he is the only known member, and then the notion of limiting frequency will be completely inapplicable. My comment on this argument is twofold. In the first place, it is not needed in order to show that it is meaningless to talk of the probability of a particular event on von Mises' definition of "probability". This is immediately obvious from the definition. Secondly, if a person does attach a meaning to "probability" as applied to particular events, all that the argument will teach him is what he knew already, *viz.*, that he must never talk of the probability of an event without qualification, but must always talk of its probability with respect to such and such data. There is nothing in the argument to prevent such a person from saying that the probability of Mr. Smith surviving to his 41st birthday, relative to the datum that he is an Englishman of 40 and to that alone, is

measured by the frequency with which Englishmen of 40 have been found to survive to 41.

(iv) The fact that there are collectivities, in von Mises' sense, is an empirical fact. The evidence for the existence of limiting frequencies in games with dice, cards, etc., is provided by the experience of gamblers, proprietors of casinos, governments holding lotteries, and so on. The evidence that these limiting frequencies are the same for all selections which fulfil von Mises' conditions is provided by the failure of all gambling "systems". On p. 16 von Mises says that the probability of a certain die throwing a 6, as defined by him, is "a physical property of the die, of the same kind as its weight, its thermal conductivity, etc." I think it is plain that these assertions are highly questionable; but I shall defer consideration of them until we have seen what von Mises has to say about the laws of Great Numbers, which are likely to be relevant in this connexion.

We can now pass to the second Lecture, which is concerned with the objects and methods of the Calculus of Probability. The general problem of the calculus may be stated as follows: "You are given the probabilities for the various alternatives in certain collectivities. You are asked to infer the probabilities for the various alternatives in certain other collectivities *derived from the former*". It is no part of the business of the calculus to provide the original probabilities; these must be supplied by observation or postulated hypothetically. To think otherwise is to make a mistake about the calculus of the kind which a person would make who confused geometry with mensuration. In every probability-calculation both the premises and the conclusion are statements of probabilities. Lastly, we must remember that the probabilities 0 and 1, on von Mises' theory, do not mean "certainly not" and "certainly", respectively. They mean only that the frequency of a certain alternative in a certain collectivity tends to 0 or to 1, respectively, as the number of terms is indefinitely increased.

The question that remains is "What is meant by *deriving* a collectivity from other collectivities, and how is it done?" Von Mises says that the process of derivation has four and only four fundamental forms, and that any particular case can be reduced to a single or a repeated application of one or more of these four procedures. He calls them *Selection*, *Mixture*, *Division* and *Combination*. I will now explain what he means by them.

(i) *Selection*. This consists in selecting an infinite class, in accordance with some rule, from the members of a collectivity, and considering the probability of the *same* alternatives within the selected class. It follows from the definition of a collectivity that the probabilities are unchanged.

(ii) *Mixture*. Here we consider the same set of terms as before, but we take as a single alternative a disjunction of several of the original alternatives. Thus the original collectivity might be the

throws of a certain die, considered in respect of the six alternatives 1, 2, 3, 4, 5, or 6 uppermost, and the probabilities of these might be $p_1, p_2 \dots p_6$, respectively. The derived collectivity might be the throws with the same die, considered in respect of the two alternatives odd or even uppermost. The first of these is a disjunction of the original alternatives 1, 3, and 5; and the second is a disjunction of the original alternatives 2, 4, and 6.

The rule for calculating the new probabilities in such cases is, of course, the Addition Rule. Von Mises remarks that this rule is often carelessly formulated. It is often said that the probability of (p or q) is equal to the sum of the probabilities of p and of q , provided that p and q are mutually exclusive. He points out that the probability of dying in one's 40th year or getting married in one's 41st year is not the sum of the probabilities of dying in one's 40th year and getting married in one's 41st year, although the alternatives are mutually exclusive. The condition which must be added is that one and the same *collectivity* is under consideration throughout. (On the Keynes-Johnson theory the corresponding condition would be that one and the same *datum*, e.g., the proposition h , must be considered throughout.)

(iii) *Division*. The essential point of this may, I think, be put most clearly as follows. Suppose that, in your original collectivity, a certain set of n mutually exclusive and collectively exhaustive alternatives, $a_1, a_2, \dots a_n$ was considered. Form a new collectivity by excluding from consideration every member of the original collectivity which manifests any of the alternatives $a_{m+1} \dots a_n$, and consider this in respect of the limiting frequencies of the remaining alternatives $a_1, a_2, \dots a_m$. The rule here is that, if $p_1, p_2, \dots p_m$ be the original probabilities for the alternatives $a_1, a_2, \dots a_m$, respectively, then the new probability for each will be got by dividing its old probability by the sum $p_1 + p_2 + \dots + p_m$.

It seems to me rather futile to offer this as a fundamental procedure in the calculus. It is easy to show that the rule is a consequence of applying the general principle of inverse-probability to a certain very simple special case. And the rule of inverse-probability is itself an immediate consequence of the rule of multiplication, which von Mises introduces later in connexion with what he calls "Combination". The proof of these statements is as follows. The multiplicative rule, stated in the Keynes-Johnson notation, is $(x \cdot y)/h = (x/h)(y/xh) = (y/h)(x/yh)$. From this there immediately follows the rule of inverse-probability, viz., $x/yh = (x/h)(y/xh) \div (y/h)$. In order to get von Mises' rule of "Division" we have merely to substitute the disjunction $a_1 \vee a_2 \vee \dots \vee a_m$ for y and to substitute a_1 , e.g., for x . Then $x/h = p_1$; y/xh obviously = 1, since it is the probability of an alternative proposition given that one of the alternants is true; and $y/h = p_1 + p_2 + \dots + p_m$, since the alternatives are by hypothesis mutually exclusive and are being considered with respect to the same datum. So von Mises' rule of Division follows at once.

(iv) *Combination*. Suppose we start with two collectivities, C_A and C_B , for which the alternative possibilities are respectively a_1, a_2, \dots, a_n and b_1, b_2, \dots, b_m . Let R be any relation which correlates the terms of C_A and C_B with each other in pairs. Consider the class each member of which is a *pair* of correlated terms, one from C_A and the other from C_B . Since the C_A -constituent of any such pair has the n alternatives $a_1 \dots a_n$ open to it, whilst the C_B -constituent of the same pair has the m alternatives $b_1 \dots b_m$ open to it, and each of the former could be combined with each of the latter, the terms of our new class can be considered in respect of the $n \cdot m$ conjunctive alternatives of the form $a_1 b_1, a_2 b_1 \dots a_n b_1; a_1 b_2, a_2 b_2, \dots, a_n b_2; \dots, a_1 b_m, a_2 b_m, \dots, a_n b_m$. (An example would be if C_A were the collectivity whose members are the throws of a certain die, considered in respect of turning up 1, 2, \dots 6; if C_B were the collectivity whose members are the throws of a certain penny considered in respect of turning up heads or tails; and if R were the relation of simultaneity between a throw with the die and a throw with the coin.) The problem here is to infer the limiting frequencies of each of the $n \cdot m$ conjunctive alternatives in the new class from the limiting frequencies of each of the n alternatives in C_A and the limiting frequencies of each of the m alternatives in C_B .

The reader may have noticed that I have spoken of forming a new *class*, and not of forming a new *collectivity*, by this method. The reason is that it is not necessary that a class formed in this way out of two collectivities should be itself a collectivity. Certainly it will have one of the two defining properties of a collectivity, *viz.*, that the frequencies with which each of the alternative possibilities is manifested by its members has a limiting value. But it need not have the other property, *viz.*, randomness, *i.e.*, the indifference of these limiting frequencies to ordinal selection from the class. Now, unless the class formed by combination be itself a collectivity, the limiting frequencies with which the various alternatives are manifested by its members will not be "probabilities", as defined by von Mises. He gives the following example of two collectivities which are not combinable into a collectivity. Suppose that C_A consists of the measured values of a certain meteorological phenomenon at a certain place at 8 a.m. on successive days; suppose that C_B consists of the measured values of the same phenomenon at the same place at 8 p.m. on successive days; and suppose we make a new class each member of which is the values at 8 a.m. and 8 p.m. on the same day. It might be that at every full-moon a certain value of one causally necessitates the same value of the other. The new class would then not be a collectivity, and the limiting frequencies of the alternatives in it would not be probabilities as defined by von Mises.

Assuming that the two correlated collectivities C_A and C_B are such that they can be combined to form a collectivity C_{AB}^R , there are still two different possibilities to be considered. C_A and C_B

may either be or not be "mutually independent". Suppose that a bag is known to contain red, white, and blue counters and no others, and that two counters are drawn in immediate succession on a great many occasions and their colours noted. Let C_A be the class of "first drawings" and let C_B be the class of "second drawings" from this bag. If the rule of the game is that the first counter is to be replaced on each occasion before the second is drawn, then C_A and C_B are independent. If, on the other hand, the rule is that the first counter drawn is to be kept out on each occasion until after the second has been drawn and that the two are then to be replaced, then C_A and C_B are not independent. Von Mises gives a rather complicated definition of "independence" on p. 62. It amounts to the following: Let C_A and C_B be two collectivities whose terms can be correlated one-to-one. We say that C_B is "independent of" C_A if, and only if, the following condition is fulfilled. Select in any way that you like an infinite class from C_A . Consider the terms of C_B which are correlated with the terms of this selected sub-class. Select from them, in any way that you like, an infinite sub-class. Then the limiting frequency of each alternative within this latter sub-class must be the same as the limiting frequency of the same alternative within the whole class C_B .

According to von Mises the only way in which you can tell whether two collectivities are independent or not is by experiment. If they are independent, the limiting frequency for any alternative ab in the combined collectivity C_{AB}^R will be equal to the product of the limiting frequency for a in C_A and the limiting frequency for b in C_B . Otherwise there will not be this equality. The only way in which such a question can possibly be decided is by carrying out a long enough series of observations.

Von Mises ends the lecture by working out in elaborate detail, in terms of his four processes of derivation, the simple problem in dice-throwing which the Chevalier de Méré set to Fermat, whose solution of it was the beginning of the calculus of probability. (There is a bad misprint in von Mises' solution on p. 73. In the last equation on that page the reader should substitute $5/6$ for $1/6$ and $35/36$ for $1/36$.)

The third Lecture is entitled "Critique of the Foundations". Von Mises first criticises certain alternative theories, and then considers criticisms on his own theory and proposed modifications of it. The most important points are the following.

(i) The classical definition of "the probability of an event" originated with Laplace and has been handed down in successive mathematical text-books ever since. He defined the "probability of an event" as the ratio of the number of cases favourable to it to the total number of cases both favourable and unfavourable to it, all these being assumed to be "*equally possible*". Von Mises fastens on the last proviso. He has little difficulty in showing that "equally

possible" can mean only "equally likely to happen". So Laplace's statement is undoubtedly circular, if taken as a *definition* of the "probability of an event". The only way to avoid this charge of circularity is to say that Laplace takes the notion of "*equally probable*" as indefinable, and then proceeds to define the statement that the probability of an event is so-and-so in terms of this notion.

Now anyone who takes this view will be in difficulties whenever he has to deal with a case, such as a loaded die, where the probabilities of the various alternatives are not equal. He will have to try to split up the unequally probable alternatives into disjunctions of different numbers of more fundamental alternatives all of which are equally probable; or else to admit that the theorems of the calculus of probabilities cannot be applied. Now von Mises makes the following criticisms at this point. (a) This kind of analysis, even if it can be performed, is extremely artificial in the case of loaded dice, insurance problems, etc. (b) Yet no one hesitates to apply the theorems of probability to the limiting frequencies which are found by observation in these cases. And (c) in point of fact the equal probabilities, in the case of a die which is fair, have to be established in precisely the same empirical way as the unequal probabilities in the case of a die which is loaded. In each case they are simply the limiting frequencies with which the various alternatives present themselves in a collectivity of throws. If the limiting frequencies for the various alternatives 1, 2, . . . 6 are all $1/6$ in the case of die A and are, e.g., $1/21$, $2/21$, . . . $6/21$, respectively, in the case of die B, there is no rational ground for regarding the latter set of unequal probabilities as any less fundamental than the former set of equal probabilities.

Von Mises suggests that people have thought that equi-probability is fundamental, because they have thought that there are cases in which they could tell *a priori* that the alternatives are *equally* probable, whilst no-one imagines that he can tell *a priori* what are the probabilities of the various alternatives when they cannot be seen to be equi-probable. He is referring, of course, to the so-called "Principle of Indifference". He argues, quite successfully in my opinion, that in any actual case the evidence for equi-probability is always empirical, though it does not always take the form of carrying out a series of trials with the particular object under consideration. In dealing with any particular die or penny, we know that dice are generally deliberately made as "fair" as possible, that pennies are generally made with a head and a tail and not with two heads or two tails, and so on. Again, suppose we did know *a priori* that an *accurately* cubical object, made of *perfectly* homogeneous material, would be equally likely to fall with any of its faces uppermost if *fairly* thrown. How could we possibly apply this *a priori* knowledge in any particular case? As a matter of fact we know quite well that a die is *not* a perfectly symmetrical object, since it has different numbers of spots on different faces. How can we tell,

except empirically, that this difference is irrelevant to the frequency with which these variously spotted faces will fall uppermost ?

(ii) The Laplaceans profess to find in Bernoulli's and Bayes's theorems, *i.e.*, in the laws of Great Numbers, a "bridge" by which they can pass safely to and fro between their definition of "probability" and the frequency-theory. Von Mises holds that this view is fallacious ; but the point must be deferred until we consider his account of these laws.

(iii) Von Mises uses the well-known paradoxes and contradictions, which arise when the Principle of Indifference is employed to determine the probabilities of a *continuous* set of alternatives, in order to reinforce his contention that the Principle is worthless and that probabilities are always limiting frequencies based either on direct observation or postulated hypothetically and tested by observable consequences. In this connexion he criticises von Kries's "*Spielraum*"-theory of probability.

It seems to me that von Mises' criticisms on alternative theories are highly damaging ; it remains to be seen what he has to say in answer to attacks on his own theory.

(i) We may defer his answer to the contention that there is a contradiction between the frequency-definition of "probability" and the result of Bernoulli's theorem.

(ii) It may be objected that, according to von Mises, probabilities are defined as the *limits* to which observed frequencies within a class approach indefinitely near as the number of members of the class is indefinitely increased, and that nevertheless he describes them as physical properties discoverable by observation. To this the only answer that I can find is the retort that mechanics makes use of the notions of points, material particles, etc. ; and that the notions of density, velocity, etc., in physics all involve proceeding to a limit and yet are determined by experiment and observation.

(iii) Two objections may be made in respect of the "randomness", which is an essential part of von Mises' definition of a "collectivity".

(a) It might be contended that the phrase "infinite class for which there is no intrinsic rule of construction", which is what von Mises' definition of a "collectivity" seems to involve, is simply meaningless. To this von Mises' answer is that the Formalist school of mathematicians need not object, provided that phrase is not self-contradictory, and that the Intuitionist school need not object, provided that a series answering to this description could be constructed by a procedure which they admit in other cases to be valid. Now the phrase has not been shown *to be* self-contradictory, though it has also not been shown *not to be* so. And Intuitionists do admit series for which the only rule of construction is to throw a die continually and note what turns up on each occasion.

(b) It might be objected that, even if the two factors in von Mises' definition of a "collectivity" are severally intelligible, yet they are mutually inconsistent. It might be said that, unless there

is a law connecting position of a term in a series with the alternative which it manifests, it is meaningless to talk of the frequency with which that alternative is manifested within the series as having a limiting value. Yet the condition of "randomness" just is the condition that there is no such law. To this von Mises makes the following answer. (α) There are plenty of series which *are* given by an intrinsic rule, where, nevertheless, we *cannot* say whether the frequency of a certain alternative has a limiting value or not. (An example is the following. Suppose you take the series of digits in the endless decimal which expresses the square-root of π , and substitute a 0 for each even digit and a 1 for each odd digit. The series is constructed according to a rule; but there is no answer to the question whether the frequency with which 1's occur in it has a limiting value.) This appears to me to be interesting, but quite irrelevant to the objection under discussion. (β) He says that, unless there is something in the description of a series which positively *excludes* the possibility of the frequency of an alternative in it having a limit, you are at liberty to suppose that there is such a limit and to work out the consequences. (γ) If it is objected that this reduces the whole calculus to a game, he points to the practical applications of the theory in physics and social statistics.

I think it must be admitted that the objections which we have been considering are highly plausible, and that von Mises' answers to them are not very convincing. But I think that we can go further. These objections may be called "logical", in the sense that they raise doubts as to whether any clear meaning can be attached to the statement that there are "collectivities" and "probabilities" as defined by von Mises. But, even if these logical difficulties could be removed, a serious epistemological question would remain. How are we justified in passing from the empirical premise that the frequency with which a certain die has fallen with 6 uppermost in the N times which, so far as we know, it has been thrown is so-and-so, to the conclusion that, if it were thrown infinitely many times, the frequency would approach indefinitely near to the limiting value so-and-so? Again, how can we establish empirically the very sweeping universal negative proposition there is *no* way of selecting an infinite sub-class from the original class of throws which would have a different limiting frequency for the same alternative? If we have any rational ground for believing such conclusions on such evidence, must it not involve principles of "probability" in some important sense of "probability" not contemplated by von Mises? This would not necessarily be any objection to von Mises' definition; for he is admittedly confining his attention to "probability" in the sense in which it can be measured and made the subject of a calculus. But it would show that we should have no reason to believe any propositions about probability, in his sense, unless there are logical principles of probability, in another sense.

The rest of Lecture III is devoted to writers who agree in the main

with von Mises but propose a less rigid condition in defining collectivities than that of complete randomness. The least rigid of these suggested conditions is that the series must be "Bernoullian". Suppose that p is the probability of a certain alternative being manifested by a term in the series, and suppose that we take as the terms of a new series the first n , the second n , . . . and so on, terms of the old series. Then the Bernoullian condition is that the probability of any term in the new series being any particular ordered sequence of r occurrences and $n-r$ non-occurrences of the given alternative must be $p^r(1-p)^{n-r}$ for all values of n and r . Other writers, such as Popper and Reichenbach, have proposed a more rigid condition, which includes the Bernoullian condition and another besides. Von Mises claims to show that series can be constructed which answer to these conditions and yet have limiting frequencies for the occurrence of certain alternatives which no-one in his senses would admit to be the *probabilities* of those alternatives. Hence a more rigid condition is needed in order to demarcate collectivities whose limiting frequencies shall be what are commonly taken as the probabilities of such and such alternatives. He mentions the American mathematician Copeland as one who has come nearest to defining conditions which are sufficient and yet are less sweeping than his own condition of complete randomness.

Finally, on pp. 120 to 122, von Mises gives a sketch of the work of the mathematician Dörge, who has tried to construct an axiomatic theory on von Mises' lines which shall avoid the criticisms brought against the theory in its original form. This looks very interesting, but it is too technical to be summarised here.

We can now pass to the fourth Lecture, which deals with the Laws of Great Numbers, *i.e.*, with Bernoulli's, Poisson's, and Bayes's theorems, and with later extensions and polishings of these. Von Mises' discussion of these questions seems to me to be extremely valuable and illuminating.

Let us take Bernoulli's theorem and Bayes's theorem as typical, since the former is simple to state and the latter is, in a certain sense, the "inverse" of it. We will begin with Bernoulli's theorem. I think that the essential points in von Mises' discussion of it may be stated as follows.

(i) Whatever meaning we may attach to the word "probability", both the premises and the conclusion of Bernoulli's theorem are in terms of probability.

(ii) The correct statement of the theorem is as follows. Suppose that the probability of a certain alternative being realised on any one occasion of a certain kind is p . (Take, *e.g.*, the probability of throwing a 6 in any one throw with a certain die.) Consider a set of n such occasions; *e.g.*, n successive throws with this die. Let ϵ be any fraction, *e.g.*, one-millionth. Let $\pi_{n,\epsilon}$ be the probability that this alternative will be manifested not less than $pn - n\epsilon$ times and not more than $pn + n\epsilon$ times in such a set of n occasions. Then,

no matter how small ϵ may be, the probability $\pi_{n,\epsilon}$ will approach indefinitely near to 1 as n is indefinitely increased.

(iii) We must now interpret this proposition when "probability" is defined in terms of limiting frequency. I shall state it in my own way, but I shall be giving what is in fact von Mises' interpretation of it. Consider, *e.g.*, a series each member of which is a *single throw* with a certain die. Let N be the total number of times it has been thrown, and let $N(6)$ be the total number of these which have turned up 6. It is assumed that the ratio $N(6)/N$ approaches indefinitely near to a certain limit p as N is indefinitely increased. And it is assumed that this series is "random". Now consider a new series each term of which is a *set of n throws* with the same die. Let ϵ be any fraction, *e.g.*, one-millionth. Let N' be the total number of such *sets* that have occurred, and let $N'(pn \pm n\epsilon)$ be the number of such sets which contain not less than $pn - n\epsilon$ and not more than $pn + n\epsilon$ 6's in each. Then (a) the new series is "random". (b) The ratio $N'(pn \pm n\epsilon)/N'$ approaches indefinitely near to a certain limiting value $\pi_{n,\epsilon}$ as N' is indefinitely increased. And (c) no matter how small ϵ may be, this limiting ratio $\pi_{n,\epsilon}$ will approach indefinitely near to 1 as n , the number of terms in each set, is indefinitely increased. This conclusion may be summed up more colloquially as follows. However small ϵ may be, if you increase the number of *terms in each set* and the *number of sets* sufficiently, an overwhelming majority of the sets will contain a proportion of 6's which differs from p by less than ϵ .

(iv) It is sometimes objected that, if the frequency-theory of probability were true, Bernoulli's theorem would consist in laboriously proving what is already asserted in the premise that the probability of a certain alternative being realised on any one occasion is p . It is quite evident from the interpretation of the theorem given above that this objection is mistaken.

(v) On the other hand, it is sometimes objected that the frequency-theory assumes something to be *certain* which the Bernoulli theorem proves to be only *very probable*. In the case of a die, *e.g.*, the frequency-theory assumes that the ratio $N(6)/N$ has a certain exact limiting value p when N is indefinitely increased. But the Bernoulli theorem, it is alleged, shows that we have no right to assert more than that $N(6)/N$ is very unlikely to differ by more than a certain pre-assigned small amount from p if N be made large enough. A glance at the accurate statement of the theorem above will show that this objection is invalid. The conclusion of the theorem, in our notation, is not about the limiting value of $N(6)/N$ in the original series of *single throws* as N is indefinitely increased. It is about the limiting value of $N'(pn \pm n\epsilon)/N'$ in the series of *sets of n throws* when both n and N' are indefinitely increased.

(vi) The notion that Bernoulli's theorem could act as a "bridge" between "probability" in the Laplacean sense and "probability" in the frequency sense is a complete delusion. In whatever sense

"probability" is used in the premises it must be used in that sense in the conclusion. Let us take a concrete example to illustrate this. Bernoulli's theorem shows that, if the probability in the Laplacean sense of throwing a head with a certain coin is $\frac{1}{2}$, then the probability in the Laplacean sense of getting between 49 per cent. and 51 per cent. of heads in a set of 10,000 throws with this coin is approximately .95. It also shows that the probability in the Laplacean sense of getting between 49 per cent. and 51 per cent. of heads in a set of 100 throws with this coin is approximately .16. Now in cases like the first, where the Laplacean probability is nearly 1, there is a strong tendency to pass surreptitiously from the Laplacean probability to assertions about limiting frequency. There is a strong tendency to state the conclusion in the form that in almost all sets of 10,000 throws the percentage of heads will fall between 49 and 51. But would a Laplacean be prepared to make a similar identification of Laplacean probability with limiting frequency in the second case, and to say that in 16 per cent. of sets of 100 throws the percentage of heads will fall between 49 and 51? If it is justifiable to identify *high* Laplacean probabilities with limiting frequencies of nearly 100 per cent., surely it must be equally justifiable to identify any lower Laplacean probability with a correspondingly lower limiting frequency. The plain fact is this. You cannot legitimately draw any conclusion about the limiting frequency with which a *certain proportion of heads* will occur in a series of *sets of n throws* unless you start with a premise about the limiting frequency with which a *head* will occur in a series of *single throws*. And, beside this premise, you will need the further premise that the occurrence of heads is "randomly distributed" in the original series of single throws, in the sense explained above.

Having, as I hope, made von Mises' position about Bernoulli's theorem and its relation to the frequency theory quite clear, I can deal much more briefly with Bayes's theorem. I shall again state von Mises' view in my own way. In order to be as concrete as possible I will again talk in terms of dice.

Suppose you have a set of N dice, each of which has been thrown n times and has given the *same* number $n(6)$ of sixes. Let $N(p)$ be the number of these dice which, if thrown an indefinitely large number of times, would turn up 6 with the limiting frequency p . (Of course p is a proper fraction capable of having any value from 0 to 1 inclusive). Then (a) for every possible value of p the corresponding ratio $N(p)/N$ has a characteristic limiting value as N is indefinitely increased. (b) Let ϵ be any fraction, e.g., one-millionth, and let $N[n(6)/n \pm \epsilon]$ be the number of these dice which, if thrown for an indefinitely large number of times, would turn up 6 with a limiting frequency not less than $n(6)/n - \epsilon$ and not greater than $n(6)/n + \epsilon$. Then the ratio of $N[n(6)/n \pm \epsilon]$ to N approaches indefinitely near to 1 as limit when both n and N are indefinitely increased, no matter how small ϵ may be. The conclusion may be

summed up more colloquially as follows. Suppose you have a very large number of dice, each of which has been thrown a great many times and has given the same proportion of 6's. Let ϵ be any fraction. Then, if only the dice be numerous enough and you throw each of them long enough, an overwhelming majority of them will give 6's in a proportion which differs by less than ϵ from the observed proportion, no matter how small ϵ may be.

It is obvious that this theorem is of the utmost importance for the practical application of the frequency theory of probability. For the essential point of it is the following. It enables you to start with the *observed* frequencies in a number of similar series, and to conclude that the *limiting* frequencies in the great majority of these series differ very little from the observed frequencies.

Lecture IV concludes with a fascinating account of the extensions of Bernoulli's and Bayes's theorems which have been made in recent years by Polya and Cantelli, and with an introduction to the notion of Statistical Functions.

I shall touch very lightly on the two remaining lectures, although they are of extreme interest. In Lecture V von Mises explains and deals with Marbe's problem of the expectant father who hopes that his child will be a boy and studies the recent birth-statistics; with Polya's treatment of the statistics of epidemics; and with Lexis's notion of normal, sub-normal, and super-normal dispersion. The fundamental problem of statistics, according to von Mises, is to discover whether a given set of observations can be regarded either (a) as a finite part of a certain collectivity, or (b) if not, can be regarded as following by certain assignable processes from certain collectivities. He compares the whole procedure to Kepler's observations leading first to Newton's laws of planetary motion and these leading in turn to the calculation of the actual complex and not truly elliptical paths of the planets. The lecture ends with a discussion of the theory of errors of observation, illustrated by the device known as Galton's Board.

The sixth and last lecture deals with the applications of probability in physics. It treats of the classical kinetic theory of gases; the theory of Brownian movement; the theory of radio-active discharge; the more recent developments of gas-theory by Einstein, Bose, and Fermi; and the Uncertainty Principle in quantum mechanics.

It would be difficult to recommend this book too highly. It is written with admirable clearness; it presupposes no advanced mathematical knowledge; it is full of the most interesting examples; and it provides at intervals admirable summaries of the argument and the conclusions. It is very much to be hoped that it will be translated into English.

C. D. BROAD.

Kant's Metaphysic of Experience: a commentary on the first half of the *Kritik der reinen Vernunft*. By H. J. PATON, M.A., D.Litt.(Oxon.). London: George Allen & Unwin, 1936. Two Volumes, pp. 585 and 510. Price, 30s.

THERE seems to be something in Kant's philosophy which specially attracts Scottish thinkers. In 1889, Edward Caird reviewed in two monumental volumes the whole of the Critical Philosophy. Not quite thirty years later, Norman Kemp Smith gave us a critical analysis of the whole of the *Critique of Pure Reason* in one close-packed volume of over 600 pages. Now, H. J. Paton devotes two volumes, of 585 and 510 pages, respectively, merely to an exposition of the *Asthetik* and the *Analytik*. Meanwhile, history has repeated itself: just as Caird was recalled to Oxford, as Master of Balliol College, after the publication of his *The Critical Philosophy of Kant*, so now Paton has been recalled to his English *alma mater*, where, moreover, he succeeds, in Prof. Prichard, a highly unorthodox and critical student of certain doctrines of the *Critique*. And though, as a result of this appointment, Paton and Kemp Smith no longer balance each other geographically at Glasgow and Edinburgh, their opposition in the interpretation of Kant loses none of its spice. They differ, as Paton himself puts it, "*toto coelo*" (I, 19). Where Kemp Smith, agreeing largely with Vaihinger, finds confusion and contradiction in Kant's argument, Paton finds consistency and sweet reasonableness. Where Kemp Smith finds patch-work, Paton finds a synoptic whole. Kant's theory which Kemp Smith, like the majority of Kant students, cannot, as it stands, accept as true, evokes from Paton the enthusiastic comment: "I am sure it contains far more truth than is commonly believed" (I, 19). In this spirit, Paton has done for Kant what certainly no other English student has done so thoroughly and systematically (and what, for that matter, no German scholar has done on the same scale for German students): he has gone through Kant's text, not only section by section, but "almost sentence by sentence" (I, 16). He has made a sustained effort to think himself into Kant's mind; to put himself at Kant's point of view; to interpret Kant's theory *from within* and *as a whole*; to clear away those fogs, produced by generations of Kant-commentators, which now obscure the student's vision of Kant. In this, he has, in my opinion, not only succeeded: he has succeeded magnificently. To the student wrestling with the difficulties of the first half of the *Critique*, I would say unhesitatingly: "Let Paton take you by the hand and lead you through the maze—you can find no better guide." Paton is an *anima naturaliter Kantiana*. He has written the sort of defence of Kant against his critics which a Kant *redivivus* might have written in self-defence, if, knowing what the commentators had made, or failed to make, of his *Critique*, he had deliberately limited himself to re-expounding his doctrine in the terms used in the First and Second Editions, without making any attempt

to reformulate it, or express it afresh, such as he actually made in the new portions of, and alterations in, the Second Edition, and, before that, in the *Prolegomena zu einer jeden kuenftigen Metaphysik, die als Wissenschaft wird auftreten koennen.*

My sympathy is wholly with Paton in this enterprise. What he has tried to do is something which very much needed to be done, and done as thoroughly, as understandingly, as lovingly, as Paton has here done it. We ought all to welcome an exposition of Kant which starts out by assuming that the Critique is intelligible; that it forms a whole and, humanly speaking, a consistent whole; that it is substantially true; that, as a writer, Kant is very much clearer than most of his critics. Let me hasten to add, at the same time, that Paton is no *uncritical* worshipper of Kant, if that means one who will recognise no flaws of expression or reasoning; admit no obscurities; deny all difficulties. On the contrary, there is hardly a page of these volumes, certainly no section, in which Paton does not confess that Kant's meaning has to be disentangled from hastily constructed sentences; that the argument is intrinsically difficult; that the interpretation offered, although the most plausible, is yet only highly probable, not demonstratively certain. It is noticeable how often phrases like "Kant seems to mean . . .", "Kant appears to hold . . ." recur. Yet, these phrases express, in Paton's pages, something more than mere doubt; more even than a true Scot's caution in committing himself to a conclusion on evidence which is not wholly free from ambiguity. There is in them something of the self-subordinating humility of the eager disciple at the feet of a master. At any rate, I know of no other commentator who has written, concerning a recurrent difficulty in Kant's habits of style: "There was a time when I believed that this was due to mere carelessness and perhaps to confusion. I still find it puzzling, but I have an uneasy suspicion that if I understood Kant better, these difficulties might disappear" (II, 449). The fundamental fact is that Paton's conviction of the substantial truth of his interpretation of Kant is too complete to be shaken by admitted difficulties. For him, these difficulties are a challenge to further study of Kant: they are emphatically not reasons for rejecting Kant's position as inadequate or false. Paton accepts Kant with all his difficulties as one might accept a friend with all his admitted faults. A study of Kant in this temper of mind is as rare as it is novel.

I am the more eager to pay this sincere tribute to Paton's achievement, because I cannot, myself, find my spiritual home in Kant's doctrine just as it stands. Paton's rendering of Kant comes, to the best of my judgement, as close to Kant's own meaning as any present-day interpreter is likely to get. I agree with Paton that the critics who have eagerly hunted in Kant for contradictions and inconsistencies, or who have analysed his argument into a patch-work of unassimilated strata of thought, have been sadly lacking in "feel" for the living unity of his thought. Even where I have hitherto

been inclined to assent to the current criticism that the concept of thing-in-itself differs from the concept of noumenon so essentially, that we must speak, if not of an actual inconsistency, then at least of an internal shift, a development of a deeper insight, in Kant's theory, I am now, after rethinking the matter in the light of Paton's discussion, prepared to admit that the two concepts quite probably are, as Kant claimed them to be, identical, and that the noumenon is merely the thing-in-itself in a new use, playing a new part in a fresh context of thought. Where I part company from Paton is over the truth of the Kantian theory and its value for present-day thought. The question : What is living, what dead, in Kant's thought ? is, probably, not one which Paton would wish to ask at all. Or, if he did, he would answer it very differently from me. For, he values Kant for what Kant actually means and says : I value him for the seeds and first sproutings of thoughts that have come to flower and fruition in later forms of idealism. We both regard Kant as a central and supremely significant figure in the history of modern philosophy—a *Bahnbrecher*, an explorer of new ways, a most original and profound thinker. But, Paton values the results of Kant's originality as they stand : I value them for what they have inspired later thinkers to build on them. Really, a book like Paton's should be reviewed by two reviewers at least, *viz.*, one who disagrees with his interpretation of Kant ; the other, one who challenges his estimate of the truth of the Kantian position. I can only play the part of the second kind of reviewer, for I agree too completely with Paton's interpretation of Kant to find substantial fault with it. Hence, to the question : Is Paton's rendering of Kant true to Kant's thought ? I can reply only : It is, to the best of my judgement. And all I can do in this respect is to exhibit the merits of his interpretation by one or two illustrations which seem to me to be fair samples of the quality of the whole. In the second half of this review I shall then attempt briefly to give a few reasons why on the second question, whether Kant's thought, as interpreted by Paton, should be accepted as true, I cannot follow Paton's lead.

I. As an example of Paton's skill as an interpreter of Kant, I select a crucial passage from the section on the Pure Transcendental Synthesis of Reproduction (*C. of P.R.*, A, 101-102), which Paton himself describes as "unfortunately intricate" (I., 371). Here is Kant's original text : "Wenn wir nun dartun koennen, dasz selbst unsere reinesten Anschauungen a priori keine Erkenntnis verschaffen, auszer sofern sie eine solche Verbindung des Mannigfaltigen enthalten, die eine durchgaengige Synthesis der Reproduktion moeglich macht, so ist diese Synthesis der Einbildungskraft auch vor aller Erfahrung auf Prinzipien a priori gegruendet, und man musz eine reine transcendente Synthesis derselben annehmen, die selber der Moeglichkeit aller Erfahrung, (als welche die Reproduzibilitaet der Erscheinungen notwendig voraussetzt), zum Grunde liegt". I now give Paton's paraphrase of this sentence, which begins with its end : "Kant

assumes that experience presupposes the reproducibility of appearances. He takes this to mean that it presupposes the possibility of a 'thorough-going' synthesis of reproduction, that is, of one which rests, not on occasional conjunctions of the given, but on necessary and universal conjunctions; or in other words on necessary synthetic unity (or transcendental affinity). If there is such a *necessary* synthetic unity in given appearances, it must have an *a priori* ground in the nature of the mind. Let us suppose that this *a priori* ground is a pure transcendental synthesis of the imagination which combines the pure manifold of time (and space)." Presently, he goes on to interpret: "Kant believes that he has proved that time (and in some degree space) are conditions of experience, and that appearances are not things-in-themselves, but mere ideas, which as such must necessarily conform to time, the form of the inner sense. Hence all he has to show, at the present stage of the argument, is that a pure transcendental synthesis of imagination is necessary for knowledge of time (and space); or in other words that without such a transcendental synthesis we could not represent the pure manifold of time (and space) as a manifold or have one whole idea of time and space as possessing synthetic unity. He assumes that this transcendental synthesis will impose necessary synthetic unity on the empirical manifold given in time (and space), and in this way will make a thorough-going synthesis of empirical reproduction (and therefore experience itself) possible" (I., 371, 372). Of course, read apart from all the exposition which precedes this passage, even the above interpretation will not convey much. But, it seems to me that the student, who has struggled thus far, will find that Paton here renders Kant's puzzling sentence as intelligible as it probably can be made. And this is typical of the sort of service which he renders to Kant-students all along the line.

At the same time, the interpretation just quoted illustrates an awkwardness (shall I say?) which Paton shares with Kant; which probably no Kant-expositor can wholly escape; and to which the student must just get accustomed. This is the awkwardness of using the same word in a variety of different senses. Thus, as Paton himself points out (I, 50, 51), Kant uses the word 'object' in at least four senses. It does not follow that, in doing so, Kant is necessarily contradicting himself. This "systematic ambiguity", if I may so call it, ceases to be a source of misunderstanding when we learn that each of the different senses belongs to its own context, and how these contexts are interrelated in Kant's theory as a whole. Thus, Kant is "capable of saying that the object is not known and that the object must be known; and again that the object is given to us apart from thought, and that there is no object apart from thought" (I, 51). These apparently flagrant inconsistencies are removed when we remember that Kant "expects us to judge from the context which particular sense of 'object' is meant, even although at times it may not be possible for us to do so with certainty"

(*l.c.*). I think Paton has to admit that he exploits the conveniences of systematic ambiguity nearly as much as his master, and that he often makes the same demands on the reader's intelligence and sympathy in identifying the context intended. To give but one example: when he represents Kant as asking "how synthetic *a priori* judgements can be true of reality—how for example mathematical judgements can apply to the actual world" (I, 88), he is identifying "reality" with "the actual world", which in this context can mean only the world we perceive and think, *i.e.*, the world of "phenomena". In countless other passages, on the other hand, "reality" refers to the unknowable "thing-in-itself" to which no *a priori* synthetic judgements apply; not to mention other nuances of meaning in more specialised contexts, such as the "physical world", conceived in terms of primary qualities only.

Examples of this systematic ambiguity are, it seems to me, to be found also in the passage, quoted above, from Paton's explanation of Kant's doctrine of Transcendental Synthesis. *E.g.*, when Kant is said to "presuppose the reproducibility of appearances", the word 'appearance' must, I take it, be understood in the sense of *Vorstellung* (usually translated idea or representation), not in the sense of physical thing considered as object of perception or knowledge. Again, when Paton says, in accordance with Kant's own language (*C. of P.R.*, A, 101), that "appearances are not things-in-themselves, but mere ideas" (Kant actually has: *das blosze Spiel unserer Vorstellungen, die am Ende auf Bestimmungen des inneren Sinnes auslaufen*), one has to work the saving principle of systematic ambiguity very hard to prevent the language here used from conflicting with that used in a statement like the following: "the primary qualities do not, like the secondary, exist merely when they are perceived": they are permanent characteristics of the objects of experience" (I, 61). "Ideas", presumably, "exist merely when they are perceived", but, if "objects of experience" are appearances, and if appearances are mere "ideas", the *esse est percipi* principle threatens to engulf Kant's "empirical realism" and make his position indistinguishable from that of Berkeley. In fact, the whole distinction between an "objective order" of events and a "subjective order" of sensations and thoughts, on which Paton, true to Kant, constantly and emphatically insists, is meaningless if the systematic ambiguity of 'appearance' as meaning, according to the context, either a physical object in the actual world, or a mere idea in an observer's mental history, is not steadily kept in mind. The *esse est percipi* principle applies to ideas in the subjective order, but not to physical things as objects of perception and thought, notwithstanding that both are called "appearances". The mental gymnastics required to shift from one context to another are often difficult; and it is certainly troublesome to acquire Paton's ease and facility in executing these shifts. He would have helped his readers even more, if he had always indicated when a shift is

required of them, and precisely what shift. Ideally, one would have liked a list of the main contexts in their interrelation, each suitably labelled so that each argument could be readily assigned to its proper context.

To prevent misunderstanding, let me repeat explicitly that the occurrence of this systematic ambiguity in the pages of Kant, and its use by Paton, are not necessarily evidence of actual confusion, or contradiction, of thought, but may be compatible with the contention that Kant's theory, understood with due regard for this ambiguity, is plausible, intelligible, coherent.

Passing to Paton's treatment of some of the crucial topics of the *Critique*, I would draw attention to his remarks on the relation of Kant's theory of space and time to modern mathematical theory (I, 155 ff.). This is a matter on which I, as little as Paton, can claim to speak with authority, but I am inclined to agree with his comment that it is not clear whether the mathematical theory is dealing with the same subject, or using words in the same sense, as Kant. At any rate, what Kant says of time and space as *a priori* forms of intuition is said as part of a theory of the perception of the physical world (or a theory of the physical world as an object of perception), and not as part of an abstract analysis, deliberately divorced from the question of what "interpretation" or "application", if any, the abstract concepts of the theory may have.

Again, what Paton says about Kant's treatment of Formal Logic, and its distinction from Transcendental Logic, seems to me wholly admirable, and on every point on which he disagrees with other interpreters and critics, including Caird and Kemp Smith, I am inclined to go with him; more especially, in his criticism of the view that the judgements studied by Formal Logic are purely "analytic", and that their "forms" must be distinguished from the "categories" involved in "synthetic" judgements. Looking at the whole matter, with Paton, from the Kantian point of view, I endorse his contention that "the connexion between the forms of judgement and the categories is very much more reasonable than is commonly supposed" (I, 213). Indeed, he seems to me to have understated, rather than overstated, the case for the defence, *viz.*, that, even if the method of deriving the categories from the forms of judgement is defective, in so far as the theory of these forms is defective, none the less Kant has analysed, with a very large measure of success, the logical principles involved in the scientific interpretation of Nature, *i.e.*, in the nature (so to speak) of Nature as an object of scientific perception and thought.

To Paton's handling of the relation of the concepts of thing-in-itself and noumenon I have already referred, but a word of praise is due to his masterly discussion, in this connexion, of the meaning of the much-disputed phrase "transcendental object" (I, 420-425).

He is least successful—so, at least, it seems to me; but, then, who is more successful?—in his efforts to make intelligible Kant's

notoriously difficult doctrine of the "inner sense", a doctrine in dealing with which even the principle of systematic ambiguity leaves us in the lurch. None the less, his discussion is the most valuable, because the most sympathetic, that I know (II, 418-424; also 387-390, 410-413, *et passim*). Paton also gives a very clear and plausible account of the function of imagination and its schemata.

I have checked up every passage on the translation of which Paton disagrees with Kemp Smith's rendering, or with the reading adopted by Kemp Smith. On many of these passages it is difficult to feel quite sure, but generally speaking, Paton's judgement inspires confidence. To take but one example: in A, 109 Kant writes: *Der reine Begriff von diesem transcendentalen Gegenstande . . . ist das, was in allen unseren empirischen Begriffen ueberhaupt Beziehung auf einen Gegenstand, d.i. objektive Realitaet verschaffen kann.* Erdmann, followed by Kemp Smith, suggests the emendation *allen* for *in allen*. Paton's comment (I, 418, note 4) seems to me to give a tenable interpretation of the text as it stands. In another passage (*C. of P.R.*, B, 132), Paton suggests the reading *abgeleitet* for the text reading *begleitet*, which Kemp Smith retains. I think Paton is right, and I notice that in Cassirer's edition of *Immanuel Kant's Werke*, Vol. III, p. 115 (publ. in 1913), the reading *abgeleitet* has been adopted as so obviously correct that the editors, apparently, did not even think it necessary to add a footnote pointing out that this is an emendation of the original text. In one instance, whilst remaining doubtful what the correct translation should be, Paton none the less feels certain enough of the meaning of Kant to reject the translations of others (II, 181, note 5).

Whilst I am on these textual points, I should like to express appreciation of the thoroughness with which the proofs have been read. I have not, of course, attempted to check every one of the numerous references to Kant's text, but among those which I have looked up there has been no error. Among other references, there is one small slip: Ewing's book is referred to as *Kant's Theory of Causality* in II, 423, note 3, whereas everywhere else, *e.g.*, in II, 192, note 2, it is given as *Kant's Treatment of Causality*. In the text, I have noted but a single misprint: in II, 448, line 17, 'of' should either be omitted or replaced by 'in'. And, in I, 554, note 2, should not the word 'another', rather than the word 'colour', receive the emphasis of italics?

In the exposition, I question the statement that Berkeley (as well as Hume) made explicit that the Empiricist doctrine of the mind, as a *tabula rasa* passively receiving impressions of sense, leads to the conclusion that "mind can never penetrate to a reality which is the source of these impressions" (I, 67). Surely, it is precisely Berkeley's view that God, not "matter", is the source of our impressions of sense, and that we can, and do, know this to be so?

One other point in the exposition is, perhaps, worth a brief com-

ment, viz., the problem of truth, and more especially "empirical truth". It is remarkable that, though there are several incidental allusions to "truth" in Kant's pages, the problem receives no general, and as it were full-dress, discussion. It is, however, common ground that Kant's standing formula for truth is "correspondence of thought with its object", or some purely verbal variant of this phrase. I could wish that Paton had commented on this formula, at any rate sufficiently to point out that it has nothing to do with the so-called "Correspondence Theory of Truth", as this is ordinarily stated. Seeing that, for Kant, the "object" (phenomenon) is itself a combination of "ideas", truth, for him, can obviously not consist in a correspondence of object and idea, as commonly understood. This is implied, but not made explicit, in all that Paton says about 'correspondence' in the Kantian sense. It would have been better still, if he had pointed out that 'correspondence', or even 'agreement', are infelicitous words to express what, according to Paton, Kant really means. I quote two passages in which Paton sums up Kant's theory: "To think is to judge; and in judgement we combine concepts and apply them to reality or affirm them of reality. . . . For example, in the concept 'house' we think of a combination of 'marks' supposed to be found in a number of sensible objects; and in the concept 'red' we think of a mark supposed to be found, along with others, in a number of sensible objects. When we judge that this house is red, we not only combine our concepts in the judgement; we also affirm that the combination of marks thought in these concepts is to be found in this individual object" (I, 549). And, in an earlier passage, he had said: "that there is for Kant a difference between the content and the object of thought is shown by his view that truth is the correspondence of thought with its object . . . an object proper must be given to sense (or at least be capable of being given to sense); and it is possible to have an arbitrary concept (such as the concept of *chimæra*) which, although it certainly has a content, has no corresponding object" (I, 193). Frankly, this language seems to me to obscure what is intrinsically very simple. What does the first quotation, above, really say except that the judgement, 'this is a red house', is true when the sensible object, referred to by 'this', is in fact a red house? How, indeed, can we even get the concepts 'house' and 'red', except by learning them from seeing individual houses and individual red things? What, then, do we "apply" that is not already in the object, as the phrase about "finding marks in the sensible object" seems itself to imply? The "sensible object" in which I find the marks of 'red house' is, in fact, neither a mere sensation of red (more correctly: red sensation), nor a mere rectangular patch in my field of vision, but precisely an individual instance of the universal 'red house'. In perceiving something as a red house, I have already performed all the various syntheses which Kant has analysed out as involved in intelligent perception, i.e., in perception in which I identify the object

for what it is ; and the judgement, ' this is a red house ' merely puts the experience into words. To translate ' this thing which I perceive is a red house ', or even ' this thing which I perceive has the marks contained in the concept red house ', into : ' this thing which I perceive has marks which correspond with the marks contained in the concept red house ', seems to me to introduce a false contrast between concept (or content of thought) and object, instead of the sound distinction between a universal conceived in abstraction from all instances (connotation in abstraction from denotation), and the same universal perceived in one or more instances in which it is realised or embodied. Paton I think means this, though he uses different language, when he says : " the yellowness which is part of the content of our concept of gold is contained in our intuition of each individual piece of gold " (I, 194). But, if this sentence does mean what I have tried to express in my own way just now, Paton does not appreciate that what he here says of yellowness demands to be expressed, not in terms of correspondence or agreement, but of identity, *viz.*, the identity of yellowness whether thought of in abstraction from instances, or perceived in its individual instances.

II. This review is already so long that, if it is not to exceed all tolerable bounds, I must restrict the statement of my reasons for being unable to share Paton's favourable estimate of the truth of Kant's theory as it stands, to one or two fundamental points. In formulating these points, I shall not attempt to distinguish nicely between what Kant says and what Paton says that Kant means. The difficulties of the Kantian view which stand in the way of my accepting it, as Paton accepts it, are the same in either case.

Most of these difficulties centre in the Kantian theory of the nature and function of *mind*.

I start from what is common ground, *viz.*, that Kant's *Critique* is " a philosophical analysis of human experience on its cognitive side " (I, 547). That the terms, or factors, yielded by this analysis of " knowledge " are sometimes spoken of as the " results ", or outcome, of the argument, and sometimes as its premises or fundamental " assumptions ", does not trouble me. I am willing to concede that in an argument which forms, if I may so put it, a globular whole, any part may both support, and be supported by, other parts. No, what I boggle at is the theory which forms, as Paton rightly holds, the very core of Kant's position, *viz.*, the theory that the object of knowledge is the joint product of two " conditions ", or of the interaction of two factors, both of them unknown and unknowable, and that we are supposed to know this because of the part played by one of these conditions or factors, *viz.*, the human mind, in making the object what it " appears " as being, or what it is perceived and thought to be. I do not wish to exploit against Kant and Paton the verbal paradox that " because of our powers of knowing " things " must appear to us as different from what they are in themselves " (I, 61), so that reality is unknowable precisely because the human mind,

in trying to know it, transforms it into appearance, and so that all we can know of it is that "in itself" it is in indefinable ways utterly *other* than what we perceive and think it to be. I do not even wish to use the dialectical argument that, if it is indeed true that reality is unknowable, we have no right even to the affirmation that it is other than what we perceive and think it to be. Even if the premise that 'reality, as we perceive and think it to be, is mind-determined appearance', justifies the conclusion that, therefore, reality is in itself unknown and unknowable, it does not justify the conclusion that, therefore, we know it to be *other than* what we perceive and think it to be. This conclusion is tempting, but it may none the less be false.

No, I prefer to argue from the nature and function assigned to mind in the context of the theory. What is that context? Fundamentally, it seems to me, it is that of a dualism of knower and known as two distinct existents. The knower is characterised as "mind" or "self"; the known as "reality". If the question is asked: But is not the mind itself part of reality in the most inclusive sense? the point is met by adding that mind knows itself, so that mind is also part of the known, *i.e.*, of reality. Reality, then, as known, consists of mind (or minds) and the non-mental part of reality, a scheme which fits the traditional distinction between mind and matter, and allows the realm of bodies in space to be assigned to the physical sciences, whilst psychology deals with the realm of minds. Attention next turns to what is meant by reality *as known*, *i.e.*, reality as object of a knower, as object of perception and thought to a mind or self. Here is introduced the theory that whatever is object of perception and thought is determined by the constitution of the perceiving and thinking mind, and therefore "appearance". This applies to all reality as known: both physical bodies and minds, as objects of knowledge, are "appearances". What they are in themselves remains unknown and unknowable. The world which is object of knowledge is thus, as appearance, suspended, as it were, between two unknown "things-in-themselves", both of which are, however, its "conditions" (in the sense that, without them, there could be no appearances at all). In all appearances, we can distinguish "matter" and "form": the "matter" is contributed by things-in-themselves, and is "given to inner and/or outer sense"; the form is contributed, as *a priori* synthetic principles, by mind as knower.

Now, my difficulty with a theory of this type is the double and ambiguous rôle which mind has to play as, at once, knower and known. Mind, as object to itself, is "appearance": mind, as "thing-in-itself", is unknown. Why is mind, as known, appearance? Because every object of knowledge, and therefore mind as object, is determined by the "constitution" of mind as knower. Does mind know its own constitution as knower? Can mind bring before itself—by reflection on itself, by self-conscious

self-objectifying thought—its own constitution as knower? Yes, it must be able to do so. For, is it not precisely the achievement of Kant's *Critique* to exhibit the constitution of the knowing mind as *a priori* forms, giving rise to *a priori* synthetic propositions, which are known independently of all sense-experience? But, if this be so, we have to face the crucial question: If mind thus knows itself in its constitution as knower, is mind thus known "appearance" or "phenomenon"? Clearly not. Is it, then, thing-in-itself? This, too, is impossible, for the thing-in-itself is unknown and unknowable. What then is this mind as knower and where does it fit in? It is the central hero of Kant's story; for the world of appearances, as distinct from the world of things-in-themselves, depends on it. But, being itself neither appearance nor thing-in-itself, it has no intelligible place in the scheme of the universe for which it is none the less the chief argument.

Let me drive home the difficulty by putting side by side two passages from Paton's first volume. (1) "Kant's doctrine as a whole seems to rest . . . upon the assumption that it can have *a priori* knowledge only of its own nature and of what it contributes out of its own nature to any known reality which is other than itself" (p. 563—the italics are mine; incidentally, the words "reality which is other than itself" are ambiguous, in that they would naturally refer to a physical, or at any rate non-mental, reality, but must actually refer to phenomena, including mind itself as a phenomenon). (2) "We know our own mind, not as it is in itself, but only as it appears to us under the special conditions which determine human knowledge" (p. 63). Is what the first passage calls "knowledge of its own nature", knowledge of the nature of mind as *phenomenon*? If not, how can it be "knowledge", seeing that it is the very essence of the theory to limit knowledge (as distinct from thought in general) to phenomena? On the other hand, if it is knowledge of mind as phenomenon, how can the *a priori* conditions of knowledge, because of which the object known is declared to be a phenomenon, be themselves phenomenal? To repeat: the "conditions", ambiguously called "mental", from which the theory argues to the phenomenal character of all objects of knowledge, including mind as an object of knowledge, can, as objects of philosophical analysis, not themselves be also phenomena. At the same time, the theory forbids us to ascribe them to mind as thing-in-itself. Thus, there is no intelligible room for them in the scheme at all, and yet without them the scheme itself would be impossible.¹

I find the above difficulty implicit, as it is bound to be, in countless turns of phrase throughout the more than 1000 pages of argument and exposition. I will take, at random, but one more example from quite a different context. "The object [*scil.* the phenomenon]

¹ I do not think the above criticism is covered, or met, by II, 411, or in general, by Ch. LII, on "Inner Sense and Self-Knowledge".

is indeed only a totality of ideas . . . but . . . these ideas must be regarded as states or accidents of a permanent substance in space" (II, 384, note 3; the words omitted are not relevant to the present point). I will not press the difficulty of making intelligible how what is (presumably, is *really*) "only ideas", can, let alone "must", be regarded as something quite other than ideas. I am concerned with this "regarding". Who or what does it? We—i.e., our minds? The Mind? If so, with what right and on what evidence? How can knowledge consist in regarding something as quite other than it is? For—be it noted—the point of the passage quoted is not that for commonsense and science objects of perception are things-in-themselves, whereas for philosophical analysis they are phenomena. The point here is that philosophical analysis "must" regard what is "only ideas" as something other than ideas. It is this "regarding" which I cannot fit intelligibly into the theory at all.

I do not say that Paton has remained utterly blind to these difficulties: nobody could so remain who has thought out Kant's theory so thoroughly as he. All I can say is that he does not feel the sting of these difficulties as deeply as I do, and that, therefore, they are not for him, as they are for me, obstacles to the acceptance of Kant's theory. Anyhow, nothing in his pages reconciles me to accepting Kant's theory in spite of these difficulties.

There are other difficulties, also connected with the nature and function of mind in Kant's theory, to which Paton pays much more attention, e.g., the problem whether, in analysing cognitive experience, we are analysing a universal the instances of which are the cognitive experiences of individual minds, or whether in some sense there is "one all-embracing experience" (I, 450 ff.). Correspondingly, is there *one* object world (*one* world of phenomena), common, i.e., numerically identical, for many minds, or must we think, monadologically, of as many object worlds as there are knowing minds, though these many object worlds may have common features, in the sense of numerically diverse instances of the same universals? Do you and I perceive one-and-the-same table—a "public" table, so to speak, as distinct from the "private" sensations of our several minds? (In a specialised form this question arises over secondary, as opposed to primary, qualities—e.g., I, 60 ff.) Paton rightly remarks that he has not found in Kant any attempt to answer this type of objection (I, 450). If Kant had known his Berkeley better (especially the *Dialogues between Hylas and Philonous*), he might not have ignored this problem, though indeed his familiarity with Leibniz's doctrine of pre-established harmony must have made him aware of it. The fact remains that he did not deal with it, as little as we, when we are studying the logic of scientific thought or analyse the world-view of science, keep reminding ourselves that scientific thinking is the thinking of individual scientists. In not dealing with the problem, Kant practises his "empirical realism", and employs what we may

conveniently call the "principle of the irrelevance of the observer" (expressed by Paton in the phrase: "to the world as it is known to science the differences in the time and place of human perceptions are irrelevant"—I, 452). But whether, as being also a "transcendental idealist", Kant was entitled to ignore this problem is another question, and I think Paton's attempted defence, by way of the concept of "one ideal human experience" (cf. "The whole phenomenal world of science is simply the content of one ideal human experience; for it is the real world, not as it is in itself, but as it must appear to all minds which share the same forms of sensibility and of thought"—I, 542), fails because it does not meet the issue. For, the issue arises from the fact that we start with the common-sense belief that our *many* minds perceive *one-and-the-same* world. Having "private" sensations and thoughts, even if we also "share" the same forms of sensibility and thought, still gives us only the identity of a universal in its numerically diverse instances: it does not give us the numerical identity of *one* world and *one* experience.

I must resist the temptation to take up countless other topics, stimulatingly treated in Paton's pages. But, it is due to Paton that I should repeat, in conclusion, that his book is the most helpful guide to Kant's thought in the English language, and perhaps in any other language, as well. As such, it is an achievement of the first order. And, though I cannot agree with his estimate of the truth of the Kantian doctrine, I do agree with him in honouring Kant as the most original and stimulating thinker in the history of modern thought. What I feel I owe to Kant are two fundamental insights. The first is his complete reform of the theory of knowledge, effected by analysing knowledge, not into "ideas" in fancied contrast with "things" or "objects", the nature and existence or non-existence of which is then futilely debated, but into judgements in which the nature and existence of objects is affirmed on the basis of sense-perception, whilst, at the same time, through the analysis of judgement forms Kant is led to the recognition of the logical structure of the object-world given in perception.¹ And my second debt is his programme of a synoptic philosophy, in which knowledge (in the sense of empirical science), morality, beauty, purpose, religion, all must find their place as aspects of the Universe which reveals itself to us and through us to itself. This last phase is, admittedly un-Kantian, but the thought which it expresses is one which Kant's theory of "appearances" suggests, once it has been freed from the incubus of the "thing-in-itself".

R. F. ALFRED HOERNLÉ.

¹ The logic of thinkers, like Bradley and Bosanquet, with their theory of judgement as "reference of an idea to reality", i.e., the theory that in every judgement reality is, in principle, affirmed to be what we perceive and think it to be, is the direct heir of the Kantian tradition, having, however, shed on the way the distinction between appearance and thing-in-itself, as Kant had drawn it.

G. W. F. Hegel: *Jenenser Realphilosophie*. Aus dem Manuskript herausgegeben von JOHANNES HOFFMEISTER. Verlag von Felix Meiner in Leipzig, 1931 and 1932. Pp. x + 290 and pp. ix + 284. I. *Die Vorlesungen von 1803/04*. II. *Die Vorlesungen von 1805/06*.

THE technical student of Hegel will find these two volumes of great importance. They contain the hitherto unpublished lectures on the philosophy of nature and of mind (designated by Hegel as *Realphilosophie*) delivered in Jena during the years 1803-04 and 1805-06. These lectures supplement those of 1804-05 on logic, metaphysics, and the philosophy of nature, edited by Link and Ehrenberg as *Hegels erstes System*, and later re-edited by Lasson and published in Vol. XVIII of his complete edition of Hegel's works, under the title *Jenenser Logik, Metaphysik und Naturphilosophie*. We now have before us in complete form the first sketch of Hegel's system of philosophy which he taught in Jena prior to the publication in 1807 of his *Phenomenology of Mind*. The question of Hegel's system, written before he published his first major treatise, is now no longer a matter of conjecture. The system is now available to scholars in the shape in which Hegel conceived and developed it. Of the trilogy—logic, philosophy of nature, philosophy of mind—constituting the *Encyclopædia* we thus have an early exposition.

These two volumes, in each of which the treatment of the philosophy of nature covers two-thirds of the text, reveal for the first time the source of the *Zusätze* printed by Michelet in his edition of the second part of Hegel's *Encyclopædia*. Without indicating their early origin, Michelet selected portions of the Jena lectures on the philosophy of nature and incorporated them for purposes of elucidation in the later text as if they were integral parts of it. In parallel columns, at the end of Volume II, the editor correlates Michelet's addenda with the early passages taken from the second early version of Hegel's *Naturphilosophie*. In reading Lasson's revised text of the *Encyclopædia*, printed without Michelet's *Zusätze*, we have Hegel's mature exposition of his philosophy of nature. At the same time, we may now appreciate Michelet's additions, not as isolated fragments, but as component parts of an anterior composition.

Each of these two volumes contains a separate version of Hegel's early *Naturphilosophie*. The two versions have much in common, but they also differ much from each other. The lectures of 1803-04 are couched in a terminology borrowed largely from Schelling. The lectures of 1805-06 show less dependence on Schelling; in many respects they foreshadow Hegel's later view of nature as expounded in the second part of the *Encyclopædia*.

Those interested in the early Hegel will seek in these volumes material for reconstructing the growth and development of his mature system. It must not be forgotten, however, that Hegel himself, apart from a few essays and reviews, chose to publish but

four works—namely, the *Phenomenology*, the *Logic*, the *Encyclopædia*, and the *Philosophy of Right*. In these works alone, which he offered directly to the public, is the authentic Hegel to be found. In the material which he deliberately withheld from publication, whether consistent or inconsistent with the treatises that came from his own hand, we must not look for statements to which he felt himself committed. It is manifestly unjust to judge any philosopher by his private utterances. And utterances are private, though made in lectures to students, which their author did not communicate in print to a critical audience. The documents in which Hegel recorded his early views, now withdrawn from their intended privacy, have thus only an antiquarian or a genetic value. We are interested in them on account of their association with the inner life of a great man; anything that bears the stamp of his youthful personality may be prized as a curio. But we are interested in them also because, belonging to the formative period of his genius, these documents may throw an oblique light on Hegel's finished products; whatever reflections a profound philosopher puts on paper, though written to be read by him alone, acquire importance if they facilitate an understanding of his published works.

The bulk of Hegel's private compositions, those not intended for publication, is remarkable. From his youth on he wrote voluminously. He gave to the public his first major work in 1807, but how active he had been with his pen long before this date has only come to light during the last thirty years, beginning with Nohl's edition of *Hegels theologische Jugendschriften*. It is astonishing what little use the mature Hegel made of his early manuscripts. While some of the ideas formulated in them have survived in his published books, their original formulations do not reappear there. We look in vain for any considerable portion of his early writings incorporated verbally in his printed statements. The form in which he expressed his ideas in his private compositions he did not retain in the compositions which he offered to the public.

The two volumes before us are compositions in a form peculiarly their own. The parts dealing with the philosophy of mind, it is true, are expressed in a terminology that suggests the later treatment of the subject, but the parts devoted to the philosophy of nature are formulated in a way which Hegel never reproduced. Although different from each other linguistically, the two versions of his early philosophy of nature follow the same dialectical procedure. The logical or animistic conception of nature (it may be called one or the other according to the point of view of the critic) is here unfolded with amazing boldness. With an imagination upon which he places no restraint, Hegel ranges copiously among phenomena both inorganic and organic, and, undismayed by the difficulty of the task, proceeds to convert them into a hierarchy of noumena. Of the pathos of distance from the *Begriff*, which belongs to nature according to his later view, there is here no intimation. Hegel makes no conces-

sions; nature is represented as rational in all its states and phases. To be sure, Hegel's later recognition of nature's irrationality, made on dialectical grounds, could not save his mature *Naturphilosophie* from remaining the weakest part of his system; his "anticipations of nature", to use a Baconian phrase, are notoriously ludicrous. And what shall we say of the attempt made in his Jena lectures to read into the specific facts of nature the themes and rhythms of his dialectical logic? Remembering Hegel's affinity with romanticism, let us call the attempt "poetic".

These Jena lectures have thus at present no scientific or philosophic value. Every serious student of nature will be repelled by Hegel's animism and verbalism. One example must suffice. Hegel, speaking of the relation between light and the plant, says: *Das Licht ist darum tätig, erregend, weil die Pflanze als organisches Selbst dies Licht selbst ist. Um der Selbständigkeit beider willen muss das Licht da sein für die Pflanze, und sein Dasein im Einzelnen ist zufällig für sie; notwendig [ist] die Abwechslung von Licht und Finsternis. Sie strebt dem Licht so entgegen, wie der einsame Mensch den Menschen sucht, ringt sich aus der Erde herauf, ihm zu. In verschlossenen Gewölben, Kellern, wo eine Ritze ist, ranken sich Kartoffeln, als ob sie den Weg wüssten, nicht in gerader Linie, sondern nach den Winkeln der Wände dem Lichte zu. Durch diese Einheit des entgegengesetzten innern und äussern Selbst[s] ist der reine Prozess überhaupt* (Vol. II, p. 126). Of such mythical "explanations" of natural phenomena the early *Realphilosophie* is all compact. Hegel's master-myth is the *Begriff*, which he seeks in every crannied wall. But the search for the *Begriff* throughout nature is so thorough and is carried into detail with such power that we cannot fail to admire the speculative genius directing it. Yet we shall not learn much about Hegel's later teaching if we study the *Realphilosophie* merely as an earnest of his early genius. We shall only learn the curious fact, of interest to the antiquarian, that before Hegel gave to the world his *Phenomenology*, he chose to exercise his genius on a seemingly fantastic venture. What is the relation between a venture of this kind and the mature system?

The genetic import of the *Realphilosophie* suggests a topic of great difficulty. If "the child is father of the man", the works of Hegel's youth must contain the seeds out of which grew the finished system. And since the works of his youth have now been made accessible, we should be able to trace the line of Hegel's development. To what extent are these works continuous with the works of his maturity? To what degree are the former consistent with the latter? Assuming the continuity of Hegel's "ideology" (and against this assumption we have the preface to the *Phenomenology* in which Hegel repudiates views he had himself seemingly entertained), what is the common thread that runs through all the products of his reflection? The problem is not a simple one. In Hegel's private writings now made public we have an embarrassment of riches. Much depends upon

the interpreter's selection of material, and upon his ingenuity in handling it. And no one interpreter, alas! can disclose entirely what has been so aptly called the "secret" of Hegel.

One interpretation, for example, is Dilthey's. His *Jugendgeschichte Hegels* (1905) shows what can be done with some of Hegel's early manuscripts. Between the years 1790 and 1800 Hegel composed a number of essays on a variety of themes. Some of them are pre-occupied with theological subjects, and a few of these reveal a distinctly mystical trend. It is these latter which Dilthey makes central. On their strength he imputes to the young Hegel a mystic experience, and interprets the system in the light of it. Dilthey's hypothesis, worked out in detail and with great acumen, is not unpalatable. (A similar hypothesis is advanced by Jean Wahl in his *Le malheur de la conscience dans la philosophie de Hegel*, 1929.) The charge of "panlogism" brought against Hegel thus becomes untenable. The dialectic is indeed a dialectic of universal categories, but the categories must be understood as having their source in a reason touched with emotion. *Begriffsordnungen deuten ihm so auf eine Seelenverfassung zurück*. These words epitomise Dilthey's thesis. Hegel's logic, derived from his mysticism, was thus in its origin, in Royce's phrase, a "logic of passion".

But with all due respect for Dilthey's judgment, his hypothesis of Hegel's mysticism does not carry conviction. For that hypothesis the evidence is rather slight. It rests on but a few of the *Jugend-schriften*, and even these admit of a different interpretation. Against Dilthey's view there is Hegel's own declaration that his philosophy is not the result of a mystic intuition or vision. In the preface to the *Phenomenology* he heaps scorn upon those for whom *das Absolute soll nicht begriffen, sondern gefühlt und angeschaut . . . werden . . . Das Schöne, Heilige, Ewige, die Religion und Liebe sind der Köder . . . ; nicht der Begriff, sondern die Ekstase, nicht die kalt fortschreitende Notwendigkeit der Sache, sondern die gärende Begeisterung soll die Haltung und fortleitende Ausbreitung des Reichstums der Substanz sein*. It would be difficult to find a more complete disavowal of a mystic approach to philosophy. In the first sketch of Hegel's system, of which the *Realphilosophie* before us is an integral part, there is accordingly no trace of an earlier mysticism. Here is panlogism with a vengeance! And if we ignore the theological writings, and select from Hegel's unpublished material what is most consistent with his mature doctrine, we find in his first systematic product a remarkable likeness to the later Hegel.

Yet we cannot ignore the theological writings. Nor can we disregard the fact that, though Hegel had on paper an elaborate draft of a complete system, he decided instead to appear in print with a statement of the method requisite for the system. The early material with which we are now acquainted Hegel intentionally withheld from the public. What he first gave to the public was the argument, to which the *Phenomenology* is devoted, presupposed for

an understanding of his philosophy. The argument embodied in this book involves a continuous thread of reflective experiments intent upon showing the logical incongruity of the recurrent types of human persuasion. The method directing these reflective experiments is the dialectical. This consists in viewing each type of persuasion *ab intra* as if nothing but that type could be true. The key to Hegel's argument lies in the expression "nothing but": every type of persuasion, if taken as exclusive, breaks down, owing to the very exclusiveness with which it is endowed. The result is that truth for Hegel turns out to be a hierarchy of typical persuasions in which none is sufficient unto itself but in which each is necessary. But we cannot arrive at the collective truth of human persuasions until we have experimented with them distributively in accordance with the assumption of self-sufficiency and independence made by each. The dialectical method as exemplified by the *Phenomenology* is thus essentially histrionic; it makes central the necessity of enacting each persuasion as it is assumed to be "for itself" in order to discover by internal criticism the contradiction it harbours.¹ The histrionic nature of this method, applied in the *Phenomenology* to the multifarious persuasions of the human mind, affords a clue to the early system as well as to the writings antedating it.

The various compositions Hegel left unpublished must be taken together, and when thus taken they show how histrionic his procedure was in dealing with any subject that engaged his attention. His cast of mind was dramatic, and in presenting a theme he assumed for the time being the rôle of protagonist. But his protagonism was factitious; it was an experiment designed to express nothing but the chosen theme in the terms appropriate to it. Consider his essay of 1795 on the life of Jesus, included amongst the theological *Jugendschriften*. Jesus is here depicted as a disciple of Kant. And what Hegel gives us is a pale Galilean and a still paler Kant. The Lord's prayer, for example, Hegel renders as follows: "Father of men, to whom all heavens are subject, Thou, the most holy, mayest Thou be the ideal which we strive to approach; may Thy Kingdom soon come in which all rational beings will recognise the law alone as the precept of their actions! To this idea may all inclinations, even the cry of nature, be gradually submitted! In the feeling of our imperfection as compared to Thy holy will, how could we set ourselves up as severe or even as resentful judges against our brothers? Rather, we will work in us that we may better our hearts, and ennoble the motives of our conduct, purging progressively our intentions of evil, in order that we may become like unto Thee whose holiness and blessedness are alone eternal"

¹ See the writer's "The Exoteric Approach to Hegel's 'Phenomenology'" and "The Comedy of Immediacy in Hegel's 'Phenomenology'", in *MIND*, Vol. XLIII, No. 172, and Vol. XLIV, No. 173, respectively.

(Nohl, p. 85). The golden rule Hegel translates thus : " Whatever you could wish that it should become universal law among men, even against yourselves, according to such a maxim you shall act—this is the fundamental law of all morality, the content of all legislation and of the sacred books of all nations " (Nohl, p. 87). The essay is nothing else than a literary experiment. Is it conceivable that Hegel's impersonation of Jesus as the mouthpiece of Kant was more than a deliberate *tour de force* ? To take it otherwise, is to assume that, at the age of 25, Hegel was incredibly jejune, an assumption not borne out by his other literary efforts of the same period. The later " mystical " writings, in which Jesus appears in opposition to Kant, show the same experimental procedure. Here Hegel appears as the protagonist of " love ". And this theme is carried to the same excess as the previous theme of " law ". But it is an excess dictated by the same method to represent nothing but the chosen theme. Many of his mystical statements are obviously facetious. One illustration will suffice. Speaking of baptism, Hegel says, " The custom of John (of Jesus no such act is known) to immerse in water those trained in his spirit was significantly symbolic. There is no feeling so homogeneous with the longing for the infinite, with the desire to flow into the infinite, as the desire to bury oneself into the fulness of water ; . . . there is in the fulness of water no gap, no limitation, no manifoldness—the feeling of the water is one and simple " (Nohl, p. 319). It is difficult to accept such an utterance, and many others like it, as indicative of Hegel's own persuasion. It flies in the face of the sense of humour and irony with which Hegel was so richly endowed. Hegel's mysticism simply does not ring true. He took up the mystic's position in histrionic fashion in order to exhibit it *ab intra*. The histrionic art practised with such consummate skill in the *Phenomenology* is definitely foreshadowed in the theological writings.

The same art is manifest in the other unpublished material. Of this art the now published *Realphilosophie* is a significant illustration. His early philosophy of nature, in particular, reveals Hegel's tendency to assume a point of view and to work it, as it were, to death. If nature is rational, then its rationality must be exhibited in *all* its forms and processes. There must be nothing in nature not subject to reason. With painstaking attention to details, many of them drawn from the sciences of the day, Hegel enters upon the amazing task of " explaining " the order and connection of specific phenomena as the order and connection of universal noumena. Nature is here represented as nothing but the trans-substantiation of the *Begriff*. And the representation is so centrifugal, as centrifugal as his earlier impersonation of mysticism and his later impersonations of the various persuasions enacted in the *Phenomenology*, that we must regard it as one of Hegel's characteristic experiments to place himself at the centre of a subject and to follow it through to its ultimate limits.

The continuity between the material Hegel intended to consign to oblivion and the first authentic statement of his philosophy is rather one of method than of content. In the order of publication, the *Phenomenology* comes first; the system is the sequel to it, as Hegel emphatically declares in the preface to his *Logic*. We are expressly bidden by Hegel to understand his system as a consequence of the method. This method, the validity of which depends upon the progressive series of experiments developed in the *Phenomenology*, is dramatic; it requires the experimenter to be protean in his factitious protagonism. Hegel enacts in succession a selected variety of human persuasions, and he enacts each in its own terms with such relentless logic that its oneness calls for correction by a higher persuasion. This method, governing the construction of the *Phenomenology*, dominates also his early intellectual efforts. Taken together, they show that the dialectical method which Hegel later proclaimed as objective and universal was from the outset a mode of reflection and a technique of work peculiar to his dramatic genius.

J. LOEWENBERG.

Psycho-analysis and Social Psychology. By WILLIAM McDUGALL.

London: Methuen, 1936. Pp. x + 207. 7s. 6d.

Inhibitions, Symptoms and Anxiety. By SIGMUND FREUD. Trans.

by ALIX STRACHEY. London: Hogarth Press, 1936. Pp. 179. 6s.

IN 1935 Dr. McDougall came to London and delivered a series of lectures on psycho-analytical theory. These are printed in this book, together with reprints of articles on the same subject and a note on the social evils which are alleged to spring from Freudian error.

The task of exposing looseness of expression, wild hypotheses, unsupported assertion and contradictory theses in psycho-analytic literature is not a difficult one. Whenever we open a book written by a psycho-analyst we are liable to find on one page two forces claimed as the only ones which play any part in determining behaviour, and when we turn over we find that several equally important factors are implied, and even mentioned by name. We are used to the most fantastic allegations being made against the nurse-maids of Vienna. At one moment we are told by Dr. Flügel that jealousy lies at the very basis of the social bond, and at another that jealousy is to be guarded against because of its disruptive effects. All this is pointed out by Dr. McDougall, and he further brings some subtle arguments against the 'ark of the covenant', the Oedipus complex: if, as is now asserted, we can grow out of the Oedipus complex and replace it by something else, then it no longer

exists in all adults, and if its existence in all adults is the main evidence for the hypothesis that it exists in all children, is its universality not a little blown upon ?

In truth, when we pry too closely, the whole structure creaks, and as we pry we find ample opportunity for cracking jokes at the expense of its creators.

All this does not mean that the task of criticising psycho-analytic theory is unworthy or unnecessary. On the contrary, it is essential, and the thrusts, the quips, the wit, the analysis and confrontation of parallel passages in this work are of value. We are emboldened by its publication. We may have felt a little embarrassed on the subject ; if we attack the theory, are we not thereby condemning ourselves, and proving its truth ? Now at any rate we shall be able to meet our psycho-analytic acquaintances with an armoury of weapons. In fact, this is a book which should be read by all students of psycho-analysis, and we may be sure that it has been relished by Freud himself.

For students of psychological theory, however, it has a deeper interest. We are all grateful for the exhibition of inconsistencies, and many of us have already felt that the psycho-analytic 'explanation' of society is not its strongest point, but we are, most of us, a little uneasy about the nature of psychological 'explanation' itself.

The physical sciences are in a happy position, because their noumenal world is mathematically structured, and it is positively disadvantageous to attempt to picture the nature of the alleged entities to which the numbers and functional relationships refer. The phenomena, the pointer-readings, introduce us at once into a world in which we can feel at home because we know how to do sums. *What* we are doing sums 'about' does not matter ; let it be electrons, protons, neutrons, or 'something, we know not what', it is the equations that matter, and therefore the business of showing that things are not what they appear to be, but are really something else, which is the main business of scientific 'explanation', is a fairly easy matter.

When we face biological phenomena, however, we are in a vastly different position. Attempts to 'explain' behaviour by a mathematically structured 'something, we know not what', but which is the same as the 'something' we talk about in physics, have not met with much success : we cannot get our set of pointer-readings to start us off. The difficulty is that whereas in physical science the noumenon merely carries the numbers with which we do our sums, and merely aids our feeble imaginations, the noumena which are called in to 'explain' behaviour have to be defined in terms of the phenomena which they are called in to explain. We have no direct access through the mathematical scheme.

Consider the 'Gestalt' story of 'tensions'. We are told that when we are engaged on a task there is a state of tension seeking release. If we could get at the state of tension operative in me, as

I write this article, and measure it, and if we knew the relevant formulæ, my behaviour could be 'explained' as the working out of that state of tension. We should say that when a state of tension with such and such pressure, or with such and such an electrical charge (whatever verbiage we have invented) is found under conditions measuring such and such, the result will be found by doing the following sum. As it is, we cannot do this. All we can say is that if the tension in me is sufficiently strong, I shall go on writing until I have finished, and when we ask: what is the nature of the tension in me? the answer is bound to be: it is that kind of tension that makes you feel anxious, to the degree that you *do* feel anxious, to finish your article, and it is of a strength that will make you sit writing as long as it *does* make you sit writing.

The tension picture is not useless, far from it, but it is a description of the 'phenomena under investigation' rather than a hypothetical underlying something which can be dealt with independently of the phenomena, which it is called on to 'explain', e.g. by doing sums 'about' it.

Why not, then, abandon the attempt to explain behaviour in terms remote from what you are trying to explain? Why not explain behaviour in terms of itself? This is what 'instinct' psychologists try to do. We see that the behaving organism is purposive, and therefore we invent a purposive scheme in which to fit its behaviour. It is this which calls down on the head of the psychologists who elaborate such schemes the accusation of giving no explanation at all. Why do we feed ourselves, preserve ourselves, and seek to reproduce ourselves? Because we have instincts so to do, i.e. because we do.

In this field 'explanation' takes on a different complexion. Psychological explanation for the 'instinct psychologists' consists in saying 'this act is an example of such and such an urge', tendency, instinctive drive, or whatever dynamic noise we choose to make, and an 'explanation' is felt to be the more illuminating the less the phenomenon under investigation resembles the more obvious examples of the instinct which it is alleged to be an example of.

Not unnaturally we have two kinds of temperament: one kind will choose a large number of fundamental urges, and the other only a few, and the 'explanations' of the latter will seem more odd than those of the former.

And what is the test? We cannot appeal to calculation. To what do we appeal? When we hear that scientific research is an instance of the instinct of curiosity, the information is banal; when we hear that it is an example of sexual behaviour we are liable to be incredulous. Why? It is a question of plausibility. Does it sound right? That is the test.

Now unfortunately our sense of what is plausible is not constant. We have all of us suffered the pain, if it be painful, of having to change our opinion about psycho-analytic theory at one point or

another. We are told a preposterous story, and in the light of the apparently wild illumination, we have looked once more at the behaviour it claims to 'explain'. Our apprehension of the behaviour is frequently changed, and we see something in it that we did not see before. After all, it is for this increase in our knowledge of human nature that we are most grateful to the writings of the psycho-analysts.

In connection with this question of the plausibility test of psychological theories, the second of the books we are discussing is of great interest. It is an admirable translation of Freud's *Hemmung, Symptom und Angst*, which was originally published in 1926, and which contains material already familiar to the student of psycho-analysis. We are glad that this important book is at last made accessible in English, because Freud discusses in it the meaning of symptoms, and takes various steps towards making his theory more plausible. He begins by distinguishing the mechanism of repression from that of symptom-formation, and then proceeds to consider the purpose of both. He analyses the function of repression and symptom-formation in general, and the meaning of obsessional symptoms in particular. They are, he says, defence mechanisms; not entirely, however, because there is always an element of gratification; but they have their source in the anxiety of the ego. And why should the ego be anxious? To find the answer to this question Freud investigates the nature of anxiety, and the occasions of its manifestation in childhood.

Why, he asks, do we feel as we do when we feel anxious? The answer is that we reproduce the constrictions of the birth situation; and he hints that it is useful for us to have just those constrictions because they aid the breathing and heart-pumping efforts of the newly-born infant.

When do we feel anxiety as children? At birth; whenever we are separated from our mothers; when we are threatened with castration by our fathers; and when the super-ego threatens us with a vaguer but not the less fearsome punishment.

Why do we feel anxiety at birth? Here he gives a non-plausibility explanation. He rejects the view that we feel anxious on that occasion because it is one of danger, on the ground that it could hardly be cognised as such by the child, and suggests that it is simply our reaction *in* (not *to*) a situation "in which the amounts of stimulation rise to an unpleasurable height".

Henceforth we feel this same constriction whenever we are *threatened* with a situation which will be likely to lead to such an 'economic disturbance'. Anxiety, therefore, has two aspects. In the first place it is a response in a situation in which we are powerless to drain off the piled-up energy aroused by too much stimulation, and in the second place it is a danger signal that such a situation is at hand. A situation of 'danger' is a situation with which we cannot cope.

But, it may be asked, why does the adult feel anxious in situations in which there is 'really' no danger at all? What is the 'sensible' explanation of neurotic anxiety? The answer is that he may feel anxiety in a situation in which there is dammed-up energy, *e.g.* undischarged sexual excitement, or he may feel anxiety in the face of the infantile threats of his ungrown-up super-ego, which threats are as real to the ego as any 'real' danger situation.

Here we have an interesting inter-weaving of plausible and non-plausible explanation. We used to be told that when libido was dammed up it turned into anxiety, just as water turns to steam under the appropriate circumstances—it just happens so, and it is as silly to ask for a 'sensible' reason in the former case as in the latter. Now we are told that the ego is 'reasonably' anxious, because it feels itself to be in a dangerous situation, however 'unreal' the danger may seem to us. This makes anxiety plausible.

When, however, we probe further, we find a non-plausible story lying behind the plausible one, in terms of the 'economics' of organic energy systems. To ask why an energy system does not 'like' piling up energy, but seeks to drain it away, and to expect an answer in terms of 'reasonable' likes and dislikes is absurd—it just is so, and there is an end to it. Freud's pleasure-pain principle is not, as is sometimes supposed, simple psychological hedonism all over again; he defines pleasure and pain in terms of energy distribution in the organism, and the 'principle' is a formulation of the mechanics of energy accumulation and discharge.

In this book, therefore, Freud has attempted a double task. "The study of the determinants of anxiety has, as it were, shown the defensive behaviour of the ego in a rational light" (p. 124), and at the same time he has given an interpretation in terms of the non-rational 'economic' system. We are thus afforded an interesting example of the limits of plausibility as an interpretative scheme. It is plausible for anyone to feel anxious in the presence of danger, whether it be real or not, because anxiety is the appropriate feeling for us to have, *i.e.* because our knowledge of human nature tells us that that is what humans feel under such circumstances, and there we have to leave the matter. When we ask why we should have that particular feeling and not another under such circumstances, we are bound to give a 'non-plausible' answer.

This is why, when we are thinking in terms of plausibility explanations we cannot help feeling surprised when we read on page 95: "It may be remembered that in discussing the question of mourning we also failed to discover why it should be such a painful thing." The question is almost improper; of course mourning is painful—it is the appropriate feeling for us to have when we lose some one we love. Freud, however, gives us an explanation in terms of the "economic conditions that are produced by the intense cathexis of longing".

The whole difficulty about psychological explanation is that we

cannot deal effectively in non-plausibility terms because we cannot get at the 'things' about which we are talking—energy systems, tension systems and the like, and we cannot agree on a standard of what is plausible and what is not, if we abandon the non-plausible form of explanation. And even if we were all guided by the same 'knowledge of human nature', we could not always decide what was plausible and what was not. Supposing we meet with a boaster, it is plausible to say that he has an instinct of self-assertion, because we know that people like to assert themselves, it is plausible to say that he has an inferiority complex, because we know that people are nagged by uneasiness at their own lack of importance, and it is plausible to say that he is demonstrating his sense of sexual inferiority, because we know that that is a painful subject to many people. But supposing we could agree, then we should still want to know why he felt that actual feeling on that occasion; the answer to which must be in non-plausible terms.

These are dismal reflections. It is not, of course, being suggested that psychology does not increase our knowledge, but it is being suggested that our knowledge is increased by psychology in a different way from the way in which it is increased by physical science.

W. J. H. SPROTT.

Bishop Butler and the Age of Reason: A Study in the History of Thought. By ERNEST CAMPBELL MOSSNER. New York: The Macmillan Company, 1936. Pp. xv+271. 15s.

THIS book fills a considerable gap in the history of English Thought. In the past two centuries few Englishmen can have been more written about, and few with less adequacy than Bishop Butler. With several notable exceptions the mass of comment and criticism is marred by extremes of adulation or rancour, or is merely occasional or scrappy. Hence Mr. Mossner's study is timely. It is also well executed. The author's research into a crowded age has been at once minute and exhaustive. Little, one may be sure, has escaped him: and for this reason his extensive bibliographies alone are of the highest utility. In style too the book is straightforward and attractive.

The author "is not a theologian but a student of literature and of thought" (p. xiv). Thus his work is rather a survey of the multitudinous currents of the Age of Reason, in relation to Butler, than a close critical analysis and evaluation of the Bishop's specific doctrine in its detail. For the former purpose his chief character is well chosen, since the thought and feeling of the time passed through Butler's attentive and honest mind in such a way that, notwithstanding his scanty acknowledgments, his writings plainly reflect the features of his age.

The author's plan follows generally that adumbrated in Sir Leslie Stephen's *History of English Thought in the Eighteenth Century*. But unlike Stephen he is less committed beforehand to an hostile conclusion. His first task is to show in which of the shifting senses of that term, his period is an age of 'reason'. If his definitions are unclear the fault lies elsewhere, for, in brief, his period was sadly muddled on this point. So far as a sense can be fixed at all it would appear to be a kind of inspired common-sense. The "Sovereign Court of Reason" (his chapter title) "tended to extend its jurisdiction over all of life's problems. Thus universal, thus common to all, reason often became equivalent to an infallible common-sense. . . . Confident and optimistic the Age of Reason adopted as motto that of Tertullian reversed: *Credo quia (non) impossibile est*" (pp. 14-15).

With some hesitation I would suggest that, except where Cambridge Platonist influence was direct and strong, the intuitional, self-sufficient character of reason was less pronounced than Mr. Mossner suggests. He remarks, for example, that "In the field of religion reason was considered capable of finding *in itself and by itself* the essential truths touching the nature of God and the duties of man" (p. 14, my italics). My impression, however, of the dreary wastes of apologetic and polemic, is that most of the argumentation is *a posteriori*; that their assurance was not in the sufficiency of reason 'in itself' so much as in relation to the 'course of nature'. It is even this sufficiency which Butler tends to diminish.

Secondly he traces the development of the time spirit in Deism (for which, with reservations, he accepts Stephen's distinction between constructive and critical) and orthodoxy, and shows how Butler, as theologian and moralist, at once reflects and modifies the current rationalism. "Butler's *Sermons* and *Analogy* present a cross section of the later Age of Reason in England. In them appears distinctly a reaction against the hitherto prevalent doctrine of the sufficiency of reason in religion as in all other phases of human life, and also an indication of the direction in which that doctrine was to topple" (p. xii).

Then, in two brilliant chapters, Mr. Mossner displays, with copious documentation, "the decline and fall of reason" at the ill-assorted hands of Hume and Wesley. Finally he traces Butler's reputation through the intervening years. Specially noteworthy is his demonstration of the damage done to Butler's reputation by extravagant claims, the claims made generally by academic Oxford, and particularly by Tractarian Oxford. Having been elevated to impossible heights Butler's fall could only be catastrophic; so that, ignoring the unprofitable efforts of Gladstone to perch the Bishop on the heights again, it has taken three-quarters of a century for cooler estimates of Butler's permanent value once more to appear. The author's final evaluation of the Bishop's work coincides with the general opinion that Butler the moralist betters Butler the theologian.

Yet even in the former rôle Mr. Mossner does not count him very eminent, his root defect being the importation into ethics of theological presumptions. He allows him, however, the meagre praise that, "no *historian* of ethics can afford *entirely* to neglect the elements of psychological methodology in the sermons 'Upon Human Nature'" (p. 239, my italics). This scarcely squares with his judgment that "... to the historian of thought, Butler is a fact of the past, but one that is *still highly useful*" (p. 230, my italics).

Mr. Mossner is fair-minded, and if he judges somewhat harshly it is, in my opinion, because of a deficient appreciation of the "finer points" of Butler's work. The actual analysis is scanty, occupying no more than 40 of the 240 pages of text. This accords with the author's general scheme, but it gives him an insufficient critical foundation. Many points of prime philosophical importance must be scrutinised if Butler is to receive justice. If I now venture a few detailed criticisms these will not, I trust, be taken to diminish the interest or value of the essay as a whole.

(i) Firstly two trifling matters of fact. (a) It is strange that so careful a reader should have exhibited no doubts about the legend of Butler's refusal of the primacy. It is true that the definitive settlement of this gossip of Mrs. Sarah came too late (Professor Norman Sykes, in *Theology*, Vol. xxxiii) for Mr. Mossner's use; but the positive evidence is plainly negligible, and a number of recent writers have shown their hesitation to accept it. The negative evidence is overwhelming. (b) It is scarcely correct to describe Reid and Hume as 'friends'. There was very slight intercourse between them, and Hume (by then immersed in history) while courteously acknowledging, refused to attempt any reply to, the *Inquiry*.

(ii) A more important point of history is Mr. Mossner's acceptance of the commonplace interpretation of Wollaston as an extreme rationalist in ethics, desiring to give to contemporary moral judgments the force of a *a priori* ethical intuitions. His is a "theory based completely upon *a priori* reasoning and appeals to the abstract intellect" (p. 117). In reality (as can be seen by reading *The Religion of Nature Delineated*) Wollaston's rationalism is a very moderate one indeed, and concerns the form of morals only. For its content he looks to a reason which might better be called the prudent use of experience. His general maxim too, howsoever empty in use, is rather empirical than an 'appeal to the abstract intellect'. Roughly transcribed it is, "Act in a manner accordant with your own nature and with the realities of the situation in which you find yourself". In determining what that nature is he combines psychology and tradition in a fashion nearer to Butler than to Clarke.

Space will not permit more than brief references to a few specific points in Mr. Mossner's treatment of Butler's writings.

(iii) As to the section of the *Analogy*, "Of a Future Life", the author, after very slight exposition, dismisses the argument as "futile". But (a) is it so obvious that the 'instrumental' view of

the relation of mind and body is affected radically by advanced physiological knowledge? This view may have little positive to commend it and may be very weak, but, so far as I can see, the general issue of epiphenomenalism *versus* instrumentalism remains much as it was when Butler sought not so much to prove anything positive (even though he does, in this section particularly, advance positive analogies) as to remove objections based upon supposed incompatibilities with 'nature'. The key to this section, as to the whole book, lies in the first sentence "Strange difficulties have been raised. . . ." (b) Further, again without attempting to decide the familiar problems; is it so plain that "Kant disposes of all attempts to transfer such terms as *indivisible* and *composite* from the material world, where they have meaning, to the immaterial world, where they are meaningless?" I should have thought that of many immaterial subjects, *e.g.*, emotions, sentiments, arguments and the like, these predicates might be meaningful. (c) Is Butler's refusal to accept Locke's identification of personality and consciousness just "quibbling"? It seems reasonable to hold that my personality involves much more than that of which at any one time I am conscious. Does the past play no part in my personality save through conscious memory?

(iv) Mr. Mossner calls "completely beside the point" Butler's argument to the effect that "The Opinion of Necessity" does not affect his question. He objects that the Bishop "holds the Deist a fatalist, believing that man's lot has been *fixed beforehand irrespective of his actions*, whereas the Deist, in so far as he expressed himself at all, is actually a determinist believing that man's actions, in common with all other occurrences, take place in an unbroken chain of causes and effects" (pp. 88, 89, my italics). Now all the terms involved are even yet sadly ambiguous and unclear, nevertheless, putting aside fine points of language, Butler is saying of the hypothetical case he sets forth precisely what Mr. Mossner says of his Deist-determinist. He expressly includes actions and deliberations, as follows: "When it is said by a fatalist, that the whole constitution of Nature, and the actions of men, that everything, and every mode and circumstance of everything, is necessary, and could not possibly have been otherwise; it is to be observed, that this necessity does not exclude deliberation, choice, preference, and acting from certain principles, and to certain ends: because all this is matter of undoubted experience . . ." (Chapter vi., § 3). I can only leave the issue to the reader. Perhaps—even though in so plain a case authority is needless—I may cite against Mr. Mossner in his estimate of this whole argument that of Prof. Broad, who calls it not "completely beside the point", but "an extremely brilliant chapter which remorselessly exposes many common fallacies," and concludes, "I think that Butler has fully proved his point that his arguments and conclusions are wholly unaffected by any form of determinism

which is not flagrantly inconsistent with observable facts " (*Hibbert Journal*, 1923).

(v) I am not happy about the author's equally cavalier treatment (pp. 93, 94) of Butler's doctrine of probability in its application to miracles. Again it is not the truth of Butler's point as such I wish to support, but rather to question the mode of refuting it. Citing Mill as authority he distinguishes between improbability *before*, and *after* the event. But *in situ* Mill himself recognises that "the distinction between past and future is not the material circumstance" (*System*, Vol. 11, p. 173), and reduces the issue to that between "the probability of a mere guess being right, and the improbability of an alleged fact being true." Yet the miracles in which Butler is interested (notably, *e.g.*, the Incarnation and the Resurrection), whatsoever their status, are not 'mere guesses'. And what criterion have we for "guesses" and "allegations" of fact? Mr. Mossner follows Mill further in distinguishing between *kinds* of event, some of which are (presumably) likely *a priori* and others unlikely *a priori*. There can be no advance in this direction; for if anything in philosophy is certain it is that no event is *a priori* likely, howsoever worthy of expectation following experience. Mr. Mossner's attitude suggests (what, from other indications, can scarcely be true) that he fancies the notion of 'laws of nature' to be clear and simple.

(vi) The author rejects with some vigour the view, generally held, that Deism reached its term in Butler. If the name be used of all efforts hostile to orthodoxy, then Deism plainly outlived the Bishop. Nevertheless it is still tenable that the *Analogy* gave the *quietus* to what is more narrowly deemed Deism; in the sense that after 1736 it had been logically exposed. No sensible student would suppose that thereafter all Deists 'dried up'! As Mrs. Cockburn sensibly remarked (p. 181), "... I have seen a late book of theirs that mentions the *Analogy*, but still goes on with the old objections".

(vii) Concerning Butler's ethics Mr. Mossner remarks that an empirical or psychological ethics such as Butler's, even if it can establish the existence of conscience (or what could be called, transcribing Butler's phrases, consciousness of moral obligation) it can say "nothing as to the authority of conscience" (p. 121). But this misses the whole substance of Butler's position, which need not be conceded, but must at least be recognised for what it is. Butler holds that by mere inspection a feature of consciousness to which he gives the common name 'conscience' can be discriminated, and that as discriminated by inspection it carries within itself a claim to authority over the rest of man's nature. It is this character of intrinsic authority which distinguishes it radically from every other aspect, *passional*, *reflective* or *affective*, of our make-up. To deny the authority is to deny what mere inspection sets in a clear light. This is his claim, and, I judge, a sound one. When, therefore, Butler the Christian calls conscience the Voice of God he is not importing divine authority for it, but citing for its intrinsic authority an

ultimate source compatible with his Theism. His Theism is not put forward as a support of his doctrine of conscience. This cannot be too strongly emphasised while admitting, of course, that as a convinced Christian he does often embroider his ethics with threads from his theology. On this matter too, if one wishes, one may claim the weighty authority of the Professor of Moral Philosophy in the University of Cambridge.

I have put forward these criticisms chiefly as an acknowledgment of the real worth of Mr. Mossner's essay, which abundantly deserves study, and for which those interested in the Age of Reason must be deeply indebted.

Perhaps I may conclude this notice by commenting upon the interesting theory put forward recently by the author in *MIND* (*The Enigma of Hume*, July, 1936) to the effect that Hume's *Cleanthes* is Butler, and that his *Dialogues* were composed with the *Analogy* open before him. Hume's respect for Butler is beyond doubt, and, notwithstanding *Philo's* general triumph, his attitude to Cleanthes is consistent with this respect. Mr. Mossner's attempt to show that Hume's final redaction has the points of the *Analogy* clearly (and with his characteristic nuance of malice) in view is almost certainly successful. Yet Cleanthes is a much more sprightly and optimistic theologian than Butler. He is less weighed down by the sense of the ignorance of man. In sum, he is not Butler. This is not to say, however, that a good deal of Butler's thought is not represented in him.

I have noted only two misprints. P. 60, l. 3, for *imminent* read *immanent*; p. 219, l. 31, for *educational* read *educational*.

RALPH E. STEDMAN.

The Nature of Mind. (University of California Publications in Philosophy, Volume 19.) University of California Press, U.S.A., and Cambridge University Press, 1936. Pp. 232. 10s.

THE latest Californian volume proves to be a very capable and fairly intelligible collection—more of a unity than its later predecessors: the writers seem to have held more closely to the main topics and to have refused the temptation to deploy their favourite theses upon minor questions. It is not, of course, a symposium, and it is difficult to believe that the writers consulted together very long in planning their papers. I have also, as usual, found it hard to believe that these essays follow at all closely the "lectures delivered before the Philosophical Union of the University of California 1935". If they do, they were more exacting than anything I have heard in America or in England—so compressed, systematic, exhaustive; and they provide an amusing contrast with (for example) the light manner of Mr. I. A. Richard's recent lectures at Brynmawr. As

stylists, however, I should like to approve of Prof. G. P. Adams, who writes in the pleasantest academic strain, and of Prof. Loewenberg, whose picturesque transpontine inversions must endear him to any English reader. ("One thing is the avowal of mind as implicit in all beliefs, whatever their objects; another thing is the disavowal of the habitat in which mind functions . . .")

The word "mind" is, in this book, understood in many different senses: I dare say there is at least one for each contributor. Yet there *seems* to be one conclusion upon which all are agreed: it is that physiology and the study of behaviour are relevant to the study of mind but do not exhaust it. Mr. Mackay writes: "It need only be assumed from the start, in the absence of any empirical evidence to the contrary, that the data of introspection are co-ordinate with the data of physics" (*The Analogy of Mind*, p. 66). But he adds hastily: "Yet even if such a system of mental and physical correlations were established down to its last minute detail, the nature of mind would still remain problematic for the philosopher". (You see, my dear Watson?) Mr. Mackay's problem seems to be that we cannot contrive the description of mental events in the space-time of physics: he imagines a man reading *The French Revolution* on a transcontinental train: his thoughts are "elsewhere". "There is, for example, no corresponding shift in his attitude towards the Reign of Terror, if, in the course of reading about it, he happens to be transported from Iowa to Kansas" (69). Mr. Mackay also holds that we cannot be directly acquainted with our own minds; and Mr. Lenzen believes this too, and tries to give a reason in *Mind in Observation*. An observation is a causal interaction, in which observer, instrument and object all take part. I can observe the object with the instrument: in doing so, I cannot at the same time observe the instrument or observe myself. I may observe the instrument on another occasion—the instrument has then become an object. Now very likely a physical instrument is in the same state when I observe it, as when I observe with it. But I also use instruments which are "mental": these too, upon other occasions, I can observe. But it is very likely that "mental" instruments are *not* the same when observed, as when in actual use for observing other objects. There may, therefore, be a complementarity which gives rise to indeterminacy in our descriptions of our own minds; it may be that the nature of the self as observer is not itself open to observations at all. (Mr. Lenzen seems to hold that the observations of any other person could not possibly reveal the full character of the self.) If so, the physical description of the mind is bound to be inadequate and misleading. "Just as there is a limitation to the classical mechanical description of atomic processes, so there may be bounds to the applicability of physical concepts to the organism. In particular, the attempt to understand sensation as the action of a brain upon an ego is probably an unjustified extension of the idea of contiguous causality of physical theory" (59).

In *The Discernment of Mind*, Prof. Loewenberg also supports the view that I cannot be immediately aware of my own mind. Mind is not (he says) a "preanalytic datum"; when I try to attend to attention, I have no result: attention is not denotable to many people at once, and it is not separable from the object attended to. But "Whatever be the preanalytic datum for any science, it is always some ostensible object of common sense or some ostensible aspect of such an object; the method of denoting it requires a prior and selective act either of actual isolation or of particular attention" (91). It follows that there can be no science of mind, but mind is involved in every science: and by analysis of the data of introspection we may recognise that all cognition arises through the concentration of attention. Similarly we recognise that the behaviour of others (especially in such co-operative enterprises as science) involves discriminating awareness: mind is not a datum, but we become aware of it by reflection upon the data of inner and outer sense. "The method appropriate for the discernment of mind is dialectical, in the Socratic-Platonic sense, and in the sense in which philosophers generally employ it; the method consists in the reflective examination of a given situation the implications of which cannot be denied without self-contradiction" (93). In this way "we may achieve a philosophy of mind, namely, a reasoned and consistent interpretation of what mind is reflectively discerned as being". Such a philosophy is deductive in method and empirical in basis: one wonders how it differs from that philosophy which professes to be an analysis of common-sense beliefs. Presumably the vital point is that Mr. Loewenberg is trying to *vindicate* common-sense beliefs about mind, rather than to tell us what those beliefs mean. His philosophy is *exploratory*: it takes the place of the (spurious) sciences of mind: Cartesian Rational Psychology and modern Introspective Psychology: it abandons the body to the behaviourists (101).

Other writers reject the purely behaviourist thesis on the ground that we *do experience our own minds*, and that this experience cannot form part of the science of physiology or physics. Mr. Marhenke, in *The Constituents of Mind*, discusses critically various attempts that have been made, to avoid the admission of any purely and uniquely mental elements. His own view is that we do actually experience Brentano's mental act, and that (*e.g.*) Russell is obliged to introduce his "accompanying belief-feelings" precisely in order to account for this fact (203-204): "belief-feelings play exactly the same rôle in Russell's psychology that consciousness plays in traditional psychology. Belief-feelings are referential and to that extent they are occurrences that are found nowhere else but in minds" (207). Mr. Dennes also holds that I may be aware that I am conscious, but he has great misgivings about it all: "For although I think it is impossible to regard what I mean by 'conscious intending' as any sort of observable behaviour, I am quite convinced that there is little to say of it, and that its proper use is never

the attempt to mean itself, but is always the interpreting and explanation of events found in its field . . ." (26). Prof. Adams (*The Range of Mind*) is not at all apologetic: mind involves two relations which are experienced and which cannot be explained in mechanical terms. Awareness, first, cannot be a mere impact, or series of impacts, between body and stimuli: "A felt pulse of conscious awareness, a sensation, a pleasure, an image, an idea, is not an effect, but rather the concentrated expression of energies, structures, and processes which, as such and prior to their utterance in conscious life are, so far as we may suppose, non-mental and insentient" (158). "Mind, as enjoyment and felt immediacy, denotes a dimension of being other than any which could be found in spread-out processes, patterns, or logical relations." Second, Significant Expression by a mind is not to be explained as a mere mechanical cause: "I propose to call this second kind of expression, that in which consciousness and mind utter themselves rather than antecedent processes, significant expression. For, I should hold that only where something is taken to be the sign or expression of mind, are we confronted with anything which may be said to possess significance or meaning" (162). This view gives rise to a theory of communication which is directly opposed to that of *The Meaning of Meaning*: "Communication and language, the understanding of signs as the significant expressions of mind, live and move in a dimension different from that which exemplifies exclusively the categories of explanation, causality, and practical control" (165). "Understanding the meaning of a sign is not the same as explaining its genesis or consequences" (163).¹

This same problem of Communication, in which most of the puzzles about mind are included, is also discussed by three other contributors: Prof. Pepper, who might perhaps be inclined to agree with much that is said by Prof. Adams; Mr. E. W. Strong and Mr. Dennes, who both seem to have been influenced by the Logical Positivists and by *The Meaning of Meaning*. I shall summarise and comment upon this discussion under five heads:

(1) *Two Sorts of Meaning*: A symbol may mean in two different ways: it may "indicate a referent" or it may serve to communicate "a notional mood" (Strong, *Signs of Mind*, 140; cf. Dennes, 11, etc.). Poetry expresses feelings which are *naturally* evoked in us by objects and events: "Nature is not neutral for socio-affective response, however irrelevant such response may be for purposes of scientific discovery and description" (137). This must not mislead us into thinking that "poetic truth" is genuinely informative (*ib.*) or that the truth of purely matter-of-fact propositions is ever determined by our attitude towards them: "By maintaining a distinction between the effective and affective rôles of symbols

¹ There seems to be a printer's error on page 164, line 11; the passage does not make consistent sense to me unless the first "not" in that line is omitted.

... it is possible to do justice in pragmatic theory to both the representative and the direct significance of art" (141)—and, we may add, to do justice to science too; for the theory of emotive language ought to supply exactly the needed corrective for the exaggerations of *The Will to Believe* (see Strong, 134).

(2) *Common Referents*: The following from Mr. Strong illustrate the difficulties of this question—difficulties of which he is aware: "When the same symbol replaces a common referent for members of a social group, it serves as an instrument of communication" (119). "Any symbol, if used for purposes of communication, must indicate the same referent to both speaker and hearer" (139). But how can we know that A and B are acquainted with the same referent? In discussing images, feelings of pleasure, etc., Mr. Strong says: "I see no reason to doubt emotional and motor accompaniments in others not unlike my own, since like physiological equipment and environmental conditions seem to be a sufficient basis for assuming this" (133). But he *also* seems to argue that if A depicts what he images (or sees?), then it may be that B will have special reason to believe that he has common referents with A (132). I think that depiction is important because I think that the superiority of "syntactical" over "material" sentences is to be explained by reference to the depiction of signs: but it has never seemed to me that exchange of pictures gives any reason for believing in common reference, beyond the causal reason based upon physiology and behaviour. Cf. the very confusing views of Prof. Feigl "that in communication . . . only forms, logical structures are expressed, though qualia themselves can be had, lived through, appreciated, but not conveyed" (quoted on page 226).

(3) *Structure of Language and Structure of Fact*: We communicate by signs subject to rules; these rules include definitions which are not true-or-false and so are to be distinguished sharply from informative propositions. It is a mistake, however, to think that even Logical Positivists really regard definitions as arbitrary, and Prof. Pepper has been (in this respect) rather too literal to be quite just in his *Criticism of a Positivistic Theory of Mind* (devoted to Prof. Feigl's article in *Philosophy of Science*, October 1934). It seems to me that "Prague, Vienna and the two Cambridges" are often engaged in distinguishing common usages of words which are not commonly distinguished but which really are different. If they then propose to amend the language, such an innovation does not "show merely the way in which the maker of the definition proposes to use words" (216). The amendment is *justified* by facts about the common usage of words—the fact for instance, that we have been using one sign-type for two quite different things. Feigl, I think, tries in exactly this way to justify his definition of "meaning" as "neither artificial nor dogmatic. It is (he says) the simple, impartial result of a comprehensive reflection upon how propositions are used in common life and in science" (quoted on page 219).

And if such innovations as this can be *justified*, then actual usages can often be *explained*. The explanation will tell us something about the world, something which may be true or false; it will perhaps raise again in a legitimate form, many of the "pseudo-problems" which the Logical Positivists have rightly refused to discuss in their illegitimate form. We use such and such a set of rules because it is *convenient*: perhaps any set would be *possible*, but this is the most convenient. Why? Because the *facts* are of a certain kind. This account (suggested, I suppose, by Wittgenstein's *Tractatus*, 6.341) is suggested by Feigl in a passage quoted on page 225. It is also suggested by Mr. Dennes (*Mind and Meaning*): we often use one and the same sentence, Mr. Dennes says, to mean a definition, and also to mean the empirical generalisation upon which the definition is based, and which *explains* it (9).

(4) *Canons of Symbolism*: Can we in a similar way *explain* the rules which govern the use of the purely formal signs, the logical constants? Is it a *fact* that the world is logical, as well as—or in being—physical? Mr. Dennes seems to follow the view of the *Tractatus* and of *Mind and the World-Order*: "Logical form is not a further character added to existence. Anything, called a world or whatever, that is determinate, that is anything, meets *all* the logical requirements of being intelligible" (14).

(5) *Analysis*: Mr. Strong (118) and Mr. Dennes (11) discuss the special problems of the use of language for the analysis of language, and the alleged limitation of language by the inexpressible (see *Tractatus*, 4.12, etc.). Mr. Dennes tries to explain the impossibility of representing the relation of representation by the mere law of non-contradiction: "I think it is a version of this truism that is meant when we say that, if a sentence states anything . . . then it cannot also state that it states what it does, and how it states it" (12).

There are other interesting topics somewhat outside the main discussions: Prof. Adams gives an historical survey of the mind-body problem; Mr. Mackay tabulates the different *analogies* which we use when speaking of mind; Mr. Marhenke gives a critique of James and Russell and tries to supplement Prof. Broad's book on mind; Prof. Loewenberg makes some interesting remarks on Descartes; Prof. Pepper puts forward the thesis that the Logical Positivists are simply mechanistic metaphysicians in disguise, trying in vain to avoid the self-conscious admission and criticism of their own foundations.

KARL BRITTON.

VI.—NEW BOOKS.

Opera hactenus inedita Rogeri Baconi. Fasc. XIV. Liber de Sensu et Sensato. Summa de Sophismatibus et Distinctionibus. Nunc primum edidit Robert Steele. Oxonii e Typographeo Clarendoniano, Londini apud Humphredum Milford. MCMXXXVII. Pp. xviii, 221. 17s. 6d.

THE two works now published for the first time come from different MSS., deal with very different subjects, and apparently belong to widely different phases of Bacon's life. The first and more interesting, a set of *quaestiones* on Aristotle's *περί αἰσθήσεως καὶ αἰσθητῶν*, is taken from a MS. in the British Museum (Add. 8786). Mr. Steele says that it is difficult to read, from the minuteness of the script and the unusual character of some of the contractions, but otherwise good. The extreme paucity of the information supplied by the editor makes it impossible for a reader to judge of the success with which he has dealt with the difficulty mentioned second, but his statement about the general goodness of the text (I mean, as compared with, *e.g.*, that of the Amiens MS.), is borne out by examination of what he has printed. I think, however, that we ought to be given information which is missing about *compendia* which may have been erroneously expanded, and should be told much more often than we are where the editor has actually corrected his MS. And I think also that Mr. Steele has been far too grudging, in his Appendix, in supplying needful references to passages in Aristotle and the other authorities alleged by Roger. I have been defeated more than once in trying to identify the references to Aristotle's text from the often very vague words of the Appendix; it would have been no more than Christian to supply the usual reference to page, column, and line of Bekker. In the case of Algazel, Avicenna, Averroes and others, it should perhaps have been borne in mind that a mere reference to some particular sixteenth-century edition is useless to many of us who have not access to the British Museum or the Bodleian; in critical cases, where Roger is making a point of criticising the words of an 'Arabian', we should have been thankful for a little actual quotation.

The text of the work, as I say, seems to me on the whole good. But I must warn any possible reader against the oddities of Mr. Steele's punctuation. I do not know whether he got it from his MS., or devised it for himself, but I do know that fairly often, to get at the author's meaning, the reader will have, by the 'natural light', to insert commas, semi-colons, or even full stops where the editor has omitted them, or to delete them where they have been inserted. The transcription seems to have been conscientiously and competently done, but my impression is that the text has never been intelligently read through before publication by some one sufficiently acquainted with the subject-matter. I say this with no intention of complaining of Mr. Steele, who cannot be expected to be an expert in Aristotelian philosophy as well as a palaeographer, but I do think there is ground for complaint against the University of Oxford in the matter.

I may give a list of some passages where the printed text seems to me to be still certainly or probably incorrect.

P. 4, ll. 15-17, the words *quoniam . . . subsistant* (16-17), with which Mr. Steele actually opens a new paragraph, clearly are the concluding part of the preceding sentence: the new sentence (and ? paragraph) should open in l. 17 with *Illud ergo*; p. 6, l. 13, quem, l. *que* (= quae); p. 12, l. 6, dominari. Dicendum est, l. dominari dicendum est (the sentence has again been broken off unfinished by the wrong punctuation); p. 15, l. 12, auditus. It looks at first as though the sense required a correction to *visus*, but a comparison with l. 34 *infra* seems to support the text. For intelligibility the actual quotation of the words of Avicenna under examination is badly needed. P. 33, l. 21, in sua claritate. *Dele sua*. The meaning is that the atmosphere, though 'illuminated' by the sun, is not visible "in the daylight". P. 34, l. 14, diaphaneitatem in terreo. The last two words can have no relevant meaning here; l. (probably) in *aere*. P. 37, l. 8, vel ad hoc esse sufficiens istorum. The words make no sense. I suggest, as not improbable, vel ad hoc esse sufficiens <1> (= *unum*) istorum. P. 38, l. 7, non solum, *dele non*; p. 41, l. 14, vel ut pars integralis, add <vel ut pars essentie> (*cf.* 13 *supra*, 22 *infra*); p. 46, l. 32, cadit in diffinitionem predicatorum, l. in diffinitionem (so also p. 55, 31); p. 55, l. 22, sicut, *qy. l. sic*; p. 57, l. 32, manet in mixto. Dubium est, l. manet in mixto, dubium est (the sentence again wrongly pointed in the middle of a phrase); p. 58, l. 25, occultantur, l. occultatur; p. 64, l. 1, accidentaliter, l. accidentaliter; p. 70, l. 23 (Aristoteles . . . dicens) quod sunt vi. medii tantum. Is the text correctly given here? Aristotle, in the passage referred to, certainly seems to speak of six "intermediate colours", but Roger, in this very context, is trying to prove that there are only *five*. Has he somehow miscounted Aristotle's *medii*, and did he write V., or is he correcting "the philosopher"? P. 73, l. 17, cum luce; hoc est sufficientia lucis, quoniam, etc. Punctuate, of course, cum luce (hoc est, sufficientia lucis); quoniam. P. 74, l. 1, quam super contraria, the sense requires *quia* super contraria; *ib.*, l. 8, dubium est quis in quam, l. quis in *qua*; p. 79, l. 27, donec humectat, l. donec humectatur; p. 88, l. 29, ex composita sine mediocri causa, l. *sive* for sine; *ib.*, 31, non possent esse, l. possent esse; p. 91, l. 7, contradicent Aristotelem, l. Aristoteli; *ib.*, 18, contradixit Aristotelem, l. Aristoteli; *ib.* 21, Hec actu<a>li ad presens digrediendo, l. Hec *attuli* ad presens, etc. (The editor has here corrupted a correct text into something which has neither meaning nor grammar.) P. 94, l. 39, generantur, l. generari; *ib.*, 14, et humidum. Vel si hoc non sit necesse. Punctuate, humidum, vel, (the sentence is otherwise unfinished); *ib.*, l. 26, est generatio. Either this *est* or that of l. 27 is superfluous and must be omitted. P. 96, l. 19, materialem, l. materiale; p. 97, ll. 11-15, the whole sentence needs complete repunctuation to have any meaning. The comma after equidistantium in l. 12 needs to be removed, and in l. 14 for salsus. Tres we must write salsus, tres; p. 98, l. 20 (odor per se delectabilis) non est passio nutrimenti (*cf.* *ib.* 22, 24). The Aristotelian expression intended is, in the Greek, πάθος τοῦ θρεπτικοῦ (an affect of the nutritive 'faculty'). Is it conceivable that Roger misunderstood the words? Or is it not much more probable that he wrote correctly *nutritivi*, and that the error is the editor's? P. 101, l. 15, indifferenter, l. differenter; p. 103, l. 6, non est corpus fumus, aut est quoddam corpus, etc. This is nonsense, but it only needs to be punctuated thus, non est corpus; fumus aut est quoddam corpus; p. 105, the first sentence on the page as it stands is

partly absurd, partly unintelligible. In l. 5 Roger is made to say that vultures and tigers scent their quarry from a distance of fifty miles, vel m. (which, I am afraid, is taken to mean, 'or of a thousand' (!)). This can be remedied by writing out in full the word for which the m. clearly stands, *magis*. But no sense can be extracted from the words of l. 6, non possit corpus partium tantum subtiliari. Qy. did Roger write corpus *parti<t>um*? Or perhaps corpus <in omnem> partem? P. 107, l. 9, alicu habent odorem, l. <non> habent (cf. 107, 10); p. 109, l. 23, et si pura equivocatio, l. et sic<t>; *ib.*, l. 36, where the MS. apparently reads ponere V extremos medios, it seems plain from the context that what the editor should have done is not to insert <et> after *extremos* (since it is the *medii* which are reckoned as five), but to expel *extremos*, which has come in by a dittography from l. 34. P. 111, l. 17, et procedat, l. si procedat; p. 112, l. 10, set secundum divisionem continui, the sense demands that for *set* we should read *et*; p. 113, l. 35, *in quacunque* is a dittography which should have been deleted; p. 114, l. 17, ostendit, l. ostenditur; *ib.*, l. 32, sensitiva, l. sensibilia; p. 117, l. 7, modum, l. motum; p. 118, l. 16, in medio, l. in vacuo; p. 119, l. 32, salvare, l. salvari; p. 120, l. 6, requiritur non, l. non requiritur; *ib.*, l. 33, ipsius aeris, l. ipsius anime; p. 125, l. 2, in organum, l. in organo; *ib.* 32, habent dimensionem. Ad istud, etc., l. habent dimensionem, ad istud, etc.; p. 127, l. 7, obicitur ex directo hoc, l. hoc <modo> or the like; p. 129, l. 18, there should be only a comma, not a full stop after *contrariis*; the apodosis of the conditional sentence begins with the next words. *ib.*, l. 36, stare post cum. Dele *post* (which has arisen from a dittography of the *potest* before *stare*). P. 130, l. 50, can Roger really have written *simulatatem* when he meant simultaneity?; p. 131, ll. 20-30, throughout this passage *lenis* and its forms are written five times in succession for *levis*. It is the *smooth*, polished, not the *soft* body (*τὸ λεῖον* is the Greek word) that resounds when struck. The same singular error is repeated twice at p. 134, l. 8. On the same page, *esset* (l. 23) is an error for *est*. Surely after Mr. Steele had deciphered his MS., the text should have been read before publication by some one with enough knowledge of the subject-matter to remove such obvious blemishes.

I do not think the publication of the commentary will raise Bacon's reputation much. He is naturally sometimes interesting, especially in his discussion of light and colour, where he is trying to make the point that the *proprium sensibile* of vision is neither light nor colour, but an unnamed something of which both are species. And he has a wide range of reading in the works of Arabian men of science. But he shows no real originality of mind, and is always anxious by hook or crook to justify the actual dicta of Aristotle, even when, as his language shows in his remarks about the necessity of time for the propagation of light, he knows in his heart that Aristotle was wrong. Nor does he show anywhere in the treatise any real insight into the value of fact and experiment. He cites a good many observations, but almost all from the writings of other men, and they are mostly of a very loose and popular kind. Worst of all, he is prepossessed by the notion that sensible qualities in things in some way emit *species* which are "images" of themselves, and that these "images" are somehow at once corporeal and yet "spiritual". Speculations on these lines could hardly be expected to yield much fruit for the psychology of perception.

The second document contained in the volume comes from a Bodleian MS. (Digby 67), and is of a wholly different character. It is, in fact, a collection of real or alleged difficulties and cavils about the distribution of

terms in the proposition, intended as an exercise for students of logic. (In remarking on the use of *sophismata* as a name for these exercises, Mr. Steele might have recollected that Arts students at an intermediate stage of their course are, or recently were, still called "Sophisters" in some of the Universities.) Some of the "sophisms" are really puerile; others, like the problem whether the predicate of a proposition can be "quantified" have reappeared in the later history of logic, and may be presumed to be of more serious moment. I do not propose to say much about this document, partly because it would only be fully intelligible in any case to one who has a knowledge, which I do not possess, of the thirteenth-century methods of instruction in formal logic. There is also the difficulty that this MS. is clearly much less trustworthy than that of the *de Sensu et Sensato*. It has, as Mr. Steele records, a number of blanks in the text, and I feel sure also that it is not infrequently badly corrupted, though I must leave the attempt at anything like sufficient correction to those who have a much better knowledge of medieval elementary logic than myself. Mr. Steele, I am sure, will not claim to be one of these specialists, and I may therefore say, without intending any reflection on him, that here, too, his punctuation, as even I can discover, needs thorough-going reconstruction, and also that he has often been unhappily inspired in deciding whether the word *omnis* should or should not be marked off with inverted commas, so as to give it the sense of "the word 'all'". There are other miswritings about which we can be fairly certain. Thus, *e.g.*, p. 142, l. 35, *ad imitationem*, l. *ad individuationem*; p. 143, l. 35, *quorum aliquis est participium*, l. *quorum 'aliquis' est partitivum* (*cf.* 156, 2); p. 144, l. 23, *nullo appellato exigente*, l. *existente*; p. 148, l. 14, *omne agens proportionatur pati*, l. *patienti*; p. 158, l. 22, *exigit plura respectu predicati*, l. *exigit plura<le>*; p. 160, l. 14, *variatur linea per naturam*, l. *per materiam*; p. 187, l. 22, *si addetur pati*, l. *pati<enti>*; p. 199, ll. 20-21, *non immovendum*, l. *non innovandum*.

I could make this list of certain corrections a good deal longer, but it is hardly worth while to do so; what is necessary if the document is to become fully intelligible, is that the whole text, and particularly the punctuation, should be thoroughly revised by a specialist in medieval logic.

A. E. TAYLOR.

Descartes: Correspondance. Publiée avec une introduction et des notes par CH. ADAM et G. MILHAUD. Tome I. Paris, Librairie Félix Alcan, 1936. Pp. 477. 80 fr.

THIS new edition of Descartes' correspondence is to be completed in five volumes, of which the second is expected to appear in 1938. Its purpose is to make the letters more generally accessible than they are at present in the big Adam and Tannery edition of Descartes' works, from which most of them are reprinted. It is, however, superior to that edition both in completeness and in ordering, for it incorporates all the extant correspondence with Huygens, much of which was published for the first time by Prof. Leon Roth in 1926, and additional evidence has enabled the chronological order of all the letters to be established. Indeed, the dates of most of the letters in the first volume have been fixed to a day, and those of the rest within a month or so, while of only six is the destination doubtful or unknown.

Other differences from the standard edition are dictated by the editors' purpose—which they well fulfil—of serving the interests of those whose main concern is to understand Descartes' scientific and philosophical thought. Thus the spelling has been modernised and the brief historical introductions printed in the large edition before each letter, to establish its date, have been omitted, as well as the alternative readings, and all but the most essential of the explanatory notes, most of which served to illumine the history of the sciences in the early seventeenth century. Some of the notes retained have, however, been elaborated in the light of recent research. There are two important additions. The first is a French translation of all the Latin letters, printed on the same page as the original, but in rather smaller print, so that it fills no more than half the page. Only some of the Latin letters have been published in a French version before, and this was the work of Clerselier's son; his father got him to try his hand on them in order that he might kill two birds with one stone—be introduced to philosophy and at the same time practice the art of translation. This Latin-French version has been abandoned in favour of a new translation, for which the editors with unnecessary modesty claim only that it may help the inexpert to read the original. The second addition is a concise *Who's Who*, at the end of each volume, of all the persons with whom Descartes corresponds or who are mentioned in the letters. This is well done. Each entry places its subject in his (or her) historical setting, gives some idea of his life and work and explains his relation to Descartes. The editors' cross-references from one letter to another are rather sparing, but what there are are all useful. It is a pity that references to letters to be printed in later volumes must of course be given in terms of the Adam and Tannery edition; to make the new edition self-contained in this respect it will be necessary to give in the last volume a key for translating from one system of reference to the other.

The first volume contains one hundred and twenty letters, covering the years 1619-1637 (only eleven fall between 1619 and 1627). Ninety-eight of these are from Descartes (thirty-six being to Mersenne and nineteen to Huygens) and twenty-two to or about him (including fourteen from Huygens). There are also eight fragments belonging probably to the period 1630-38 and (in an Appendix) a letter of traditional schoolboy flavour written from La Flèche either by René at the age of thirteen, or else by his elder brother Pierre, to his grandmother, which ends by combining thanks for the receipt of a tip with a strong hint that further favours of the same kind will not be unwelcome. Twenty-two of the letters (belonging to the correspondence with Huygens) have appeared only in Prof. Roth's volume, and one (No. 69) has not previously been printed in any collection. Most of them are about special problems in Physics (in the widest connotation), Music, Medicine and Mathematics. Some have a special interest in the light they throw on certain defects in Descartes' character—*e.g.*, the letters concerning his quarrel with Beeckman (Nos. 17, 31-4) and the condemnation of Galileo, which prevented Descartes from publishing *Le Monde* (Nos. 58, 61-3, 72), and one in which, with the best intentions, he offers philosophical but surely cold and unsympathetic consolation to Huygens on the death of his wife (No. 99). The breach with Beeckman (caused originally by Mersenne's report that B. had written claiming that ten years previously he had taught Descartes something *de causis dulcedinis consonantiarum*) suggests not only a surprising touchiness and jealousy in Descartes but also some degree of insincerity, considering the warmth and cordiality of all the previous letters on both

sides. In spite of a promise to Mersenne (No. 17) not to say anything to Beeckman, Descartes goes for him a year later with evident gusto and even venom (Nos. 31-2). His previous acknowledgments of indebtedness to Beeckman he writes off as due to 'French politeness' and he remarks that he has learnt in just the same way from ants and worms (No. 31)! It is revealing to note that he has no hesitation in lying to Beeckman about the part played by Mersenne (No. 32) or in telling Mersenne that he has done so (No. 34). There is an interesting passage in his full attack on Beeckman (No. 32) in which he urges that B.'s claim must be vain since no one can *teach* anyone else 'Philosophy', though rationally convincing geometrical demonstrations may be taught; and in an equally Socratic vein he remarks to Mersenne (No. 17) that it is an empty boast to claim to have been the teacher of a man who knows so little and who freely confesses his ignorance. If Descartes really means this, why is he so angry because he thinks some one is claiming a few of his laurels?

There is not much in this volume of what we should now call philosophic as distinct from scientific interest. We can trace in part the history of the writing and publication of the *Discours* and the *Essays* illustrating the method, and learn something of Descartes' view of their relation to each other and to *Le Monde* (v. esp. No. 103), mainly in letters to Mersenne and Huygens; and there are a few passages referring to the *Méditations* (pp. 44, 135, 173, 329). But the passages of actual philosophical exposition are few and brief. The nearest approach to sustained philosophical argument is to be found in letters 28-30 to Mersenne, which contain a foretaste of his views on the relation between Philosophy and Theology, the proper use of reason as pursuit of the knowledge of God and the self, the eternal truths and their relation to God, innate ideas and divine freedom. Apart from these, one may note his views on the project for a universal language in No. 22, esp. pp. 92-93 (he suggests that in an ideal world it would be possible "to establish an order between all the thoughts which can enter the human mind, just as there is one naturally established between numbers", and that then a universal language would not only be attainable but would be an almost infallible guide to truth); his remarks on the use of observation and experiment on pp. 95 and 184 (he finds useful only those which can readily be verified and repeated by anyone—not, for instance, reports about haloes round candles, which in spite of every effort he cannot see for himself!); his subjective account of beauty (pp. 127-8); his defence of the maxim *omnis peccans est ignorans* (p. 351); and finally a passage in one of the fragments, in which brevity, generality and distinctness in an account of any matter are assigned as proof of a knowledge of it (p. 415).

While the text is well and accurately printed, the notes contain more errors than they should. Most of these fall under two heads. (1) Some of the mathematical equations have suffered, because a printer's devil has been let loose among the 'powers' and brought them down to earth.

Thus on p. 211, note 1, $\frac{4^n}{3^{n+1}}$ is printed as $\frac{4n}{3n+1}$. On p. 248, note 1,

$\frac{3x^2 - x}{2}$ twice appears as $\frac{3x^2 - x}{2}$. When (in the same note) this mistake

is combined with a confusion between the symbol x and the multiplication sign the result is particularly bewildering; instead of $8x^3 - 10x^2 + 3x$ we are given $8 \times 3 - 10 \times 2 + 3 \times$. (2) The notes to the fragments contain eight false references which I suspect to be due to the editors.

having relegated to the next volume a number of letters which originally they intended to publish in this, and having forgotten to alter the references to them. These are on pp. 398, note 2, and 399, note 1 ('ci-avant, p. 429'); p. 402, note 1 ('ci-avant, p. 436 et 455'); p. 408, note 2 ('ci-avant, pp. 481-2'); p. 413, note 1 (p. 497-8); p. 417, note 1 (pp. 399-400); p. 423, continuation of note 1 to p. 422 (p. 504). As the dates of the letters referred to are given, readers will find it easy to make the necessary corrections by reference to A. and T. or to Vol. II when it appears. The reference on p. 329, note 2, to p. 48-9 seems to be a slip, since the treatise there referred to is (as the editors themselves note) the *Traité des Météores*, not a metaphysical treatise; read instead p. 173. Other misprints: p. 149, l. 1, should be transferred to p. 148, 3rd last line (Latin text); p. 87, note 1, last line of second par., for $1/3$ read $\frac{1}{3}$; p. 404, note 1, for 364-5 read 364. I noted also minor misprints on p. 130, l. 12; p. 135, l. 13; and p. 436, sub Deriennes (last line).

A. K. STOUT.

Nature and Mind: Selected Essays of F. J. E. Woodbridge. With a Bibliography. New York: Columbia University Press. London: H. Milford., 1937. Pp. x, 509. Price in England, 18s. 6d. net.

THIS volume commemorates Mr. Woodbridge's seventieth birthday and consists of a collection of his essays and addresses. One of these dates from last century, the others appeared at steady intervals between 1902 and 1936. Amherst College, where he graduated, and the two universities where he taught with so much distinction—the University of Minnesota and Columbia University—make the presentation, and the essays were selected by a group of former students. The book is introduced with the "Confessions" Mr. Woodbridge wrote for *Contemporary American Philosophy*, and is completed by a necessarily long bibliography of his articles, books and reviews. The body of the book has three parts. The first of these contains twenty essays upon Metaphysics and Logic. The second contains twelve essays upon Consciousness and Cognition. The third consists of five addresses. In each part the items are arranged in the order of their chronological appearance.

The editors are fully justified in saying that these papers "show the changes and developments in a philosophy essentially constant," and the book as a whole is impressive partly for the reason I have cited and partly because of the historical interest of these periodic pronouncements upon the philosophy of the present century. They supply a sort of chart of the currents of the century's thought, and clearly indicate the pressure of its winds of doctrine, especially in transatlantic regions. The fact that Mr. Woodbridge holds himself a little aloof from controversy and has travelled far in letters as well as in space gives an added value to the collection.

In the "Confessions" Mr. Woodbridge says that he has been a disciple of Aristotle, Spinoza and Locke and that he is greatly indebted to Mr. Santayana among the moderns. What Mr. Santayana said of Aristotle, namely, that with Aristotle "the conception of human life is perfectly sound, for with him everything ideal has a natural basis and everything natural an ideal fulfilment" comes near to being an epitome of Mr. Woodbridge's philosophy. His indebtedness to Spinoza and to Locke may not

be quite so striking; but he believes Spinozistically in "structure" and he likes, with Locke, to be sent to his senses for information, although he objects strongly to most of Locke's methods of extracting the information. The upshot is a catholic realism—"a realism of principle not of selection". As he says, "the 'whole of existence' can be related to nothing and compared with nothing". It can only be accepted and explored. "It is the seeing of what existence reveals that defines the unity in existence and discovers the manifoldness of its revelations."

The various essays in the logico-metaphysical part of this volume corroborate the Confessions, and at some length (290 pp.). The naturalism is there (*e.g.*, p. 254, "What has naturalism really done to man? . . . It has changed him, from an illustration of what nature is not, to a profound illustration of what nature is"). But the naturalism has an ideal bent and the second essay, as early as 1903, attempts to vindicate the independence of metaphysics. It is not a rounding off of science. It is not poetry or theology in disguise. It defines (clarifies?) reality without attempting to go behind ("explain") it. For the rest, Mr. Woodbridge in this essay is anxious to "define" certain categories, such as individuality, continuity and purpose, regarding these as ultimate and supplementary to one another, although existing side by side, rather than as strands in a seamless garment. In the main he occupies himself in enquiring and in re-enquiring into such principles, paying special attention, it would seem, to teleology and to "structure". The former theme is constantly in his mind, as is natural in one who had to spend a large part of his youth in defining what could or what should be meant by evolution; and one of Mr. Woodbridge's most solid contributions to the subject seems to me to be his essay on "Natural Teleology" where the teleology within nature (*i.e.*, the possibility of putting to use), the comparative value of different uses, and the sort of fact that Whitehead later called "conrescence" are effectively explored. To this the essay on "structure" as an alternative to substance (but not in the Hegelian way of Absolute Subject) seems an important supplement.

The essays on "Consciousness and Cognition" are strongly influenced by the polemical atmosphere surrounding James's provocative essay "Does consciousness exist?" Mr. Woodbridge, like Mr. Alexander later, regards this category as a particular type of togetherness. "Consciousness," he says (p. 308), "should be defined as the same general type of existence as space, time or species. Its nature is akin to theirs"; and, fundamentally, "Objects are connected in consciousness in such a way that they become known. . . . We know what our objects are and what we may expect from them, not at all by considering their relation to consciousness, but to one another." Consciousness is not "awareness" (p. 340), but the relations of "meaning" of its so-called "contents". (This seems to confuse between inference and implication. "Meaning" seems usually to be interpreted as implication, but consciousness [p. 341] is said to be intermittent, which implication is not.)

Many other points are raised, however, and acutely handled. There is much discussion of the sensory contents of consciousness and of their relation to the nervous system. Indeed, in this part of the book rather too many points are raised and some of them are belauded or extingished in something of a hurry. That is where a collection of essays on the same sort of topic is less satisfying than a longer connected argument. On the other hand, the short essay can be very pithy, and in this connection I

should like to record the enjoyment I found in Mr. Woodbridge's account of the straight stick, "if the stick is really neither straight nor bent, then its appearance as bent is not the appearance of a stick which is really straight. . . . To affirm that if a circle appears elliptical, then its elliptical appearance is an ellipse is not to state a fact, it is to make an assumption which condenses whole volumes of speculative philosophy and psychology into a single sentence." Among other good things (as I opine) Mr. Woodbridge's vigorous insistence that his system is *strong* because he holds that consciousness "does nothing" and *yet* is a fact of great importance, is particularly telling in the way he puts it.

The addresses that form the remainder of the volume deal for the most part with what lies nearest to the author's heart, the love of wisdom and the need for learning to think. They deserve to survive the occasion of their utterance.

JOHN LAIRD.

Goethe's 'Faust' und das Christentum. By KARLERNST W. WEISSLEDER. Leipzig: S. Hirzel, 1936. Pp. xi + 38. M. 1.40.

THE author of this pamphlet appears to have two philosophic aims. One is to repudiate any suggestion that Goethe was making concessions to orthodox Christianity in his *Faust*, the other to refute the idea that happiness can be the aim of life. He consequently conceives Faust's career under the tutelage of Mephistopheles as a vain pursuit of happiness, and declares (p. 26) that Mephisto loses his bet. But in the poem Faust certainly makes remarks which seem to justify Mephisto in claiming fulfilment of his part of the bargain, though he derides Faust for making them, and his victim is only snatched away from him by the *force majeure* of a miracle. On the other hand, if the course of events is viewed in connexion with the Prologue in Heaven (as of course it should be), Mephisto is all along the divinely appointed instrument of Faust's salvation. Before he appears Faust had despaired, not merely of happiness, but of *all* the values of life; at the end he has been cured of his pessimism, and recovered belief in human progress and in happiness by work; it is this that constitutes his real salvation. Mr. Weissleder's contentions are not rendered more plausible by a somewhat pedantic and tortuous style of exposition.

F. C. S. SCHILLER.

Ideology and Utopia: An Introduction to the Sociology of Knowledge. By KARL MANNHEIM. London, Kegan Paul, Trench, Trubner & Co., Ltd., 1936. (International Library of Psychology, Philosophy and Scientific Method.) Pp. xxxi + 315. Price 15s.

THE doctrines expounded in this book represent the culmination of a line of thought that has been going on in Germany since the time of Marx. As they are undoubtedly of the first importance to sociology, it is regrettable that they should be first presented to English readers in so disjointed a form. In all, the book is divided into five parts, three of which are translated from the author's *Ideologie und Utopia* (Bonn, 1929). Part V is a translation of an article entitled "Wissenssoziologie", contributed to Vierkandt's *Handwörterbuch der Soziologie* in 1931, while Part I is an introduction

specially written for the English-reading public. To these have been added a preface written by one of the translators and a twenty-four page bibliography, compiled with the thoroughness one expects from the graduate schools of Chicago. The task of translating has been adequately discharged by Louis Wirth and Edward Shils, though one feels that they would have produced a more readable text if they had been more faithful to English idiom and less faithful to German.

Whatever be the defects in the presentation of his work, Professor Mannheim's central ideas are quite clear and straightforward. He claims to have set forth the programme and reaped the first fruits of a new discipline to which he gives the title *Wissenssoziologie* (The Sociology of Knowledge). The principle thesis of this science is "that there are modes of thought that cannot be adequately understood as long as their social origins are obscured" (p. 2); and perhaps the best way to expound and criticise his views is simply to test the meaning, truth and range of application of this statement.

(1) As regards its meaning, we are left in no doubt. In Victorian times the origin of a statement was thought to have no bearing on its truth, but Prof. Mannheim believes this is no longer a reasonable view to maintain, since truth is dependent on experience and experience upon the standpoint or perspective of the experient. There is, of course, one absolute standpoint—the Cartesian one—but as it happens to be absolutely subjective, it cannot form the subject of communication, unless the hearer and speaker have already found a common social 'platform'. Such platforms are provided by common purposes. *E.g.*, Descartes and Regius understood each other on physics because they both tried to learn the nature of things at first hand; Descartes and Hobbes misunderstood each other, because Hobbes wanted to learn the nature of things by indirect methods. In the moral sciences, where the practice of 'talking past another' is almost normal, it is necessary to seek out communities of purpose more deliberately and consciously. In general, we may say that those in like positions have like purposes and therefore understand each other. The rich understand the rich, and the poor understand the poor; once each understand their own positions, they may understand each other—at any rate on money matters.

In order to study any society or social question, one must approach it from a point of view, preferably that of one's own social class, and one may later reach a more comprehensive understanding of it by widening one's outlook, though not necessarily by changing one's point of view. The implications of such a doctrine are plain, though Dr. Mannheim manages to avoid stating them. Of two equally comprehensive theories of society, it is impossible to pronounce one true and another false, except in the sense that the one suits you or your group better than the other. Of course, that does not make one's choice of theory arbitrary, since one cannot emancipate oneself at will from one's social position.

(2) A thesis such as this is very hard to prove. In the first place, it must meet the objections raised by those who favour absolutist theories of truth; in the second place, it must show that the great historic contributions to social philosophy can be traced to determinate social causes. Dr. Mannheim's reply to the absolutists will be found in the fifth part (pp. 256-275). The first point he emphasises is that social and historical knowledge seems to contain a subjective factor that is absent from mathematical and physical propositions. You cannot understand social phenomena

without at least mentally taking sides, and the more deeply you are practically involved the deeper will be your understanding of them. Secondly, the subjective factor of purpose is latent in all thinking and we cannot even approximate to the position of the pure spectator, since (as Einstein has shown in one sphere and Heisenberg has verified in another) the predicament of the observer seems to distort what is observed.

As regards the historical demonstration of the relativity of political doctrines, Dr. Mannheim can claim to have proved his thesis. He shows quite clearly that the rise of a long submerged social group is associated with the Utopian frame of mind, *i.e.*, practical enthusiasm, heroic self-sacrifice within the group, and the image of a better world just round the corner. His work in tracing the development of the Utopian mind from Chiliasm, through Nihilism to the Liberal Humanitarian Ideal and then on by stages to the Marxian myth seems to me one of the greatest contributions to social and individual psychology made in recent times.

The analysis of ideological theories is no less subtle. An ideology is a system of thought constructed by those in power or possession as a justification for conduct that tends to conserve their present status. Because it is a defence mechanism, the conduct by which it is accompanied never comes up to the standards it proclaims. According to the degree of the ideologue's awareness of the contrasts between his views and his conduct, his professions may be styled humbug, cant or hypocrisy. Another interesting feature is the analysis of the social conditions out of which different party attitudes such as bureaucratic conservatism, democratic liberalism and fascism arise. In these cases, Dr. Mannheim has given us light where till recently there was but the twilight of speculation.

(3) Assuming that it is true that our political, and even our economic, views are conditioned by standpoint, what limits, if any, are set to this new Critique of Judgment and must it always take the form of an analysis of the social conditions of the observer? It is here that one begins to detect inadequacy, if not error, in Dr. Mannheim's treatment. Are one's views about physics relative to one's social standpoint or merely to one's predicament as an embodied self reading nature in terms of light and sound sensations? If, as is ingeniously shown, mechanism and atomism are views specially congenial to the lower classes, are we to infer from this that only the upper classes can know the secrets of quantum mechanics? Is it not more sensible to say that the social position of the physicist is not relevant to his physics, though his physical position at certain critical moments is? It is true that there is a general sociology of science, an explanation in terms of social forces and individual reactions how the laboratory came to replace the lecture-room, but though the subject is touched on it is not dealt with in much detail.

The prime defect of Dr. Mannheim's great work, as I see it, is his failure to treat of the sociology of logic as well as of the sociology of sociology. It is all very well to pour scorn on the supposedly bourgeois-intellectual distinction between judgments of fact and judgments of value, but the cleavage may be one that runs through the heart of reality as well as the heart of the democrat. To solve these problems, we must trace back thought from society to the family and analyse the different uses to which reason may be put in that restricted sphere. Unless I am greatly mistaken, the roots of science, ideology, and utopia may be detected in that sphere; and in so relating social activities to their domestic origins we are but following the Stagirite himself.

ARTHUR T. SHILLINGLAW.

Les mathématiques et la réalité : Essai sur la méthode axiomatique. By FERDINAND GONSETH. Paris: F. Alcan, 1936. Pp. xi + 386, 30 fr.

THE scope of this book is much wider than its sub-title might suggest. Its aim is, roughly speaking, to discuss the genesis of the abstract and its relation to the concrete, and "le problème de l'adéquation du rationnel au réel". It is because Prof. Gonthier regards the relation between abstract and concrete as bound up with the process of axiomatisation in mathematics and logic that so much of the argument is concerned with the methodology of these subjects.

This program is not lightened by Prof. Gonthier's extremely critical attitude towards language. He warns his readers that the meaning of words is unprecise and continually changing. In using words we succeed in giving them new, extended, meanings whose explanation would need the use of *other* words in extended meanings. Thus it is impossible to define a term completely. "J'y vois . . . un caractère typique de toutes les désignations, délimitations et définitions qui nous permettent de nous orienter dans la complexité du réel (et ce caractère d'incertitude se retrouvera jusque dans la définition mathématique)" (p. 15). Such indeterminacy of reference is a characteristic feature of all knowledge, no matter how accurate. What we know is always a summary, an *aperçu*, an abstract of reality having only provisional and restricted validity. "[La Connaissance] est toujours relative aux circonstances, aux limites entre lesquelles elle doit être valable et aux dessins auxquels elle doit servir". (p. 19). Emphasis on the provisional aspect of knowledge is one of Prof. Gonthier's favourite methods of attacking absolutist opponents. But it seems to lead him to maintain an unpalatable theory of the truth values of propositions. "Il faut considérer comme normal qu'elles [perceptions] ne nous fournissent toutes qu'une première idée des choses, idée qui se révèle fautive aussitôt qu'on veut en exiger plus qu'elle ne peut nous donner" (p. 59). If this passage is to be taken literally, all propositions 'reveal' themselves as false in the light of certain demands. Either, then, all propositions are false and those we call true are simply those we have not yet examined with sufficient severity, or the truth value of a proposition is a function of the time at which it is asserted. It seems difficult to accept either of these awkward alternatives (which are themselves expressed in propositions which presumably reveal themselves as false ?) And surely to brand a proposition as false because it does not apply to terms outside its range of application is to invite confusion for the sake of a paradox. I have dealt with this point at some length because it illustrates the kind of difficulty which Prof. Gonthier's mode of thought raises again and again in the reader's mind. To a simple question such as *Is snow white?* Prof. Gonthier is unable to return a plain answer without adding elaborate reservation about shadows and reflected light and the usual warning about the summary nature of the terms involved (p. 202). But warnings of this sort end by losing all effect, for they are attached to every symbol. Since all are inevitably infected it hardly seems possible to take precautions. In general I do not find Prof. Gonthier's emphasis upon the provisional character of knowledge to be expressed with sufficient precision to admit either of confirmation or rejection. It is the expression of an attitude rather than a thesis. Upon it, however, seems to be based the claim that reality is mind-dependent—"la réalité telle que

nous l'apercevons est une construction plus ou moins autonome de notre esprit dont les fins essentielles sont de rendre l'action possible" (p. 54)—for no other supporting evidence is adduced.

An important notion in Prof. Gonseth's explanation of the process of axiomatisation which he regards as a fundamental aspect of the process of abstraction is that of a 'virtual field' or 'intuitive form' (pp. 61-65). This notion, which owes something to Kant, is undefined and is introduced by means of an elaborate analogy which is too long to quote. The 'intuitive form' of space which may serve as a sample of such forms in general appears to be either a complex mental image (or a class of such images) of the connections between positions in the visual field and movements towards corresponding positions in the kinæsthetic field. "L'enregistrement visuel, de même que l'exercice musculaire, sont comme connectés tous les deux à une *champ de moments de conscience*. Celui-ci est une *totalité mentale* à laquelle il faut attribuer [but we are not told why] une existence objective" (p. 63). It is hard to reconcile this 'objectivity' with the statement which follows almost immediately, that "l'espace de nos représentations est une *réalité purement mentale*". The intuitive form of space is a *schema*. The general characteristics of a schema are (p. 229) that it supplies only a summary description, that it may be supplemented, and that it has an 'intrinsic structure'. The last point is obscure. Suppose a system S is a schema of another system S'. Then in order for the correspondence, in virtue of which S is a schema of S', to hold, the structures (in Russell's sense of relation number) of S and S' must be identical or nearly identical. If the ascription of 'structure intrinsèque' to a schema implies more than this I have been unable to discover it.

The vagueness which surrounds the notion of a schema is the more regrettable since it is the corner-stone of Prof. Gonseth's analysis of the axiomatic method. "C'est que la constitution d'un système axiomatique revient à la construction d'un schéma mental ad hoc" (p. 232). In the absence of more precise detail Prof. Gonseth's interpretation of arithmetic and logic as branches of a very primitive sort of physics remains unproven.

The dialectical flavour of many of Prof. Gonseth's opinions is accurately reflected in his style. Much of the argument is by means of a dialogue between a platonist, a sceptical mathematician who has no need for philosophy, and the author himself in a transparent disguise. This amusing self-projection has the advantage of allowing Prof. Gonseth to make a statement, quote from it and criticise it almost in one breath. But the general impression after reading the book is of a vagueness and obscurity which the fitful illumination of striking analogies does little to disperse and for which the undoubted difficulty of the subject affords insufficient excuse.

M. BLACK.

Christian Morality: Natural, Developing, Final. Being the Gifford Lectures, 1935-1936. By HERBERT HENSLEY HENSON, Bishop of Durham. Oxford: At the Clarendon Press, 1936. Pp. 340. 12s. 6d.

In his Gifford Lectures, entitled "Christian Morality", the Bishop of Durham designs to establish, as he tells us in his sub-title and elsewhere, that Christian Morality is natural, developing and final. Morality can be

Christian because in the Bishop's view—it is one of his postulates—all morality has its roots in religion.

These conclusions are reached not by direct theological or philosophical discussion but by exhibiting historically the distinctive character of Christian morality and its naturalness in the sense of its value and its appropriateness for civilised man, and establishing by implication a like value in the associated religion, an association which the Bishop takes to be essential, for he describes Christian morality as "indestructibly theistic." He has little difficulty in showing that Christian morality exists, in the sense that the moral standpoint of Christians differed both from that of the Judaism out of which their religion grew and from that of the Hellenic civilisation which surrounded them. The former was plainly more nationalistic, in the Bishop's view more mechanical and external, and, despite a relatively sound family life, oriental in its view of women. From Hellenic morals, even at their best, as in Stoicism, the Christian diverged in spirit when not in expression; for though many Greek ethical terms were incorporated in Christian theology, their meaning changed because, as the Bishop pointedly says, "The spirit of Christianity and the spirit of Stoicism are as wide apart as love is from pride". Historically, this new or modified morality was, beyond question and from the first, theological, dependent on the personality of Jesus, on the authority of His teaching and on beliefs about Him.

It is a more difficult task to show that this historically conditioned morality is natural and may legitimately develop. The possibility of development, which is also a possibility of perversion, arises from the fact that the Christian, like any higher morality, had to exist in an environment which already had its definite characteristics, moral and other, and could from the nature of the case only gradually modify these and their development by the application, sufficient or insufficient, of Christian principles. Such a developing morality deserves to be called natural not because it is primitive but because it meets increasingly the requirements of civilised man and "the truth about the nature of man will be most fully disclosed in his latest development". Thus, in the Bishop's view, Christian sexual morality can shed the extravagant asceticism called forth by pagan licentiousness, and can permit in principle both divorce and birth control, modifying tradition, if required, in obedience to new biological knowledge and to such social and moral novelties as the self-dependence of women. In the field of race, Christian morals can, if this turns out to be scientifically justified, countenance some racial exclusiveness and condemn miscegenation without contradicting the universalism which is a recognised principle of Christianity. Similarly, Christian morals can recognise the value of the State without repudiating the Church—the Bishop does not profess to have a satisfying formula for their relations—or questioning the ultimate dependence of morality on the individual conscience. This allows the Bishop to accept in principle the right of the State to make war while freely admitting that most actual wars have been dependent for their justification on non-Christian elements in current morality. Industrialism is approved and criticised in a like spirit. It is not Christian in origin, though Christianity may have facilitated its expansion, and it is frequently unchristian in effect, but Christianity is not an unconditional enemy committed to a rival economic view and Christians as such have no special competence in economics. Lovingkindness and respect for human personality may be trusted gradually to eliminate its worst features, and these are Christian principles.

For evidence of the finality of Christian morals the Bishop depends on the personality of Jesus with its morality of personal goodness, social service and self-sacrifice, and on the depth and permanence of the impression he has made. The treatment of so large a theme is inevitably discursive and involves many assumptions explicit and otherwise, all the more because the Bishop claims to "move strictly within the sphere of recorded history". For example, it is explicitly assumed that morality is dependent on religion and that moral development is so straightforward that the latest phase, as we have seen, must be the truest. Of less explicit assumptions perhaps the most likely to raise objections are the taking for granted that neither Buddhist nor Mahomedan morality are capable of meeting civilised demands, nor the founders of these religions of serving as moral ideals for humanity. Tacitly western civilisation is taken to be civilisation and the contribution of Christianity to moral truth to be equivalent to making morality essentially Christian.

Many of these limitations are, it would seem, the unavoidable consequence of an historical method. The Bishop has given us the opinion on morals of a man of sense and experience who is also a student of history; if he has not also shown that these opinions are either Christianly inevitable or the beliefs of all truly civilised men, it is perhaps because he has been too modest to attempt to go beyond history into the fields where the proofs of such assertions must lie.

E. W. EDWARDS.

Critica dell' Idealismo. By C. OTTAVIANO. Naples: Rondinella Alfredo 1936. Pp. 194. L. 12.

THIS volume appears in a 'Collection of Philosophical Studies', edited by Signor Ottaviano himself; on the inside of the cover there is a long list of his other works, and the fact that their titles suggest that his main interest is in Catholic theology and scholastic philosophy prepares the reader to some extent for his views on Idealism. He announces in his Dedicatory Preface that his aim in this book is to secure a 'victory' for his own Catholic doctrine over 'the philosophy of immanence', by which he means 'not this or that system of Idealism', but Idealism itself 'from its origin in Descartes and Berkeley to its riper development in Hegel and his successors'. The views of all these thinkers, he maintains, are generated by a single fundamental principle, namely that 'it is impossible to speak of a reality existing in independence of thought, or unexperienced by a thinking subject'.

Against this principle he directs a battery of eleven arguments, each one of which he regards as sufficient by itself to destroy the idealist position, but the multiplicity of his ordinance is necessitated by the variety of concepts that Idealists use in their attempt to protect themselves from the fatal consequences of their original assumption. His biggest gun seems to be that spirit is meaningless except by contrast with matter, and that a doctrine which denies the independent existence of matter thereby denies spirit also and so becomes a new type of materialism. Similarly, subject and object are correlatives and the attempt to explain away either and to reduce one to terms of the other results in nonsense.

Signor Ottaviano is, on his own admission, attacking an enemy, and, assured of the truth of his own position, he makes little attempt to under-

stand his adversary's. And it surely must be a charge of high explosive rather than an argument which can simultaneously destroy Descartes, Berkeley, Kant, Hegel, Varisco, Croce and their subalterns.

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Received also :—

- H. J. de Vleeschauwer, *La déduction transcendentale dans l'oeuvre de Kant, Tome III : La déduction transcendentale de 1787 jusqu'à l'Opus Postumum*, Antwerp, "De Sikkel"; Paris, E. Leroux; The Hague, M. Nijhoff, 1937, pp. 709, 150 fr. belges.
- E. M. Bartlett, *Types of Aesthetic Judgment*, London, G. Allen & Unwin Ltd., 1937, pp. 241, 7s. 6d.
- R. I. Aaron, *John Locke* (Leaders of Philosophy Series), London, Oxford University Press, 1937, pp. ix + 328, 12s. 6d.
- D. W. Gotshalk, *Structure and Reality : A Study of First Principles*, New York, The Dial Press Inc., 1937, pp. xiv + 292, \$2.75.
- W. C. Swabey, *Being and Being Known : An Introduction to Epistemology and Metaphysics*, New York, The Dial Press Inc., 1937, pp. xv + 318, \$3.50.
- C. Hartshorne, *Beyond Humanism : Essays in the New Philosophy of Nature*, Chicago and New York, Willett, Clark & Co., 1937, pp. xiv + 324, \$2.50.
- W. Keller, *Der Sinnbegriff als Kategorie der Geisteswissenschaften, I. Teil*, Munich, E. Reinhardt, 1937, pp. 176, M. 5.
- B. Jakowenko, *Zur Kritik der Logistik, der Dialektik und der Phänomenologie*, Prague, "Internationale Bibliothek für Philosophie," 1936, pp. vii + 60.
- B. Jakowenko, *Vom Wesen der Philosophie*, Prague, "Der russische Gedanke," 1936, pp. 55.
- F. Maugé, *La Destinée et le Problème du Vrai : L'Esprit et le Réel dans les limites du Nombre et de la Grandeur*, Paris, F. Alcan, 1937, pp. 362, 30 fr.
- A. Zucca, *I Rapporti fra l'Individuo e l'Universo*, Padua, "Cedam," 1937, pp. vii + 619, L. 70.
- J. C. McKerrow, *Evolution without Natural Selection*, London, Longmans, Green & Co., 1937, pp. 63, 1s.
- A. Sesmat, *Systèmes de Référence et Mouvements (Physique classique) : I, Le problème des mouvements réels ; II, L'ancienne astronomie d'Éudoxe à Descartes ; III, Mécanique Newtonienne et Gravitation ; IV, Le système absolu de la mécanique ; V, L'optique des corps au repos ; VI, L'optique des corps en mouvement ; VII, L'esprit de la science classique* (Actualités scientifiques et industrielles, 479-485), Paris, Hermann et Cie, 1937, pp. 688, 12 fr. ; 15 fr. ; 20 fr. ; 8 fr. ; 18 fr. ; 20 fr. ; 12 fr.
- A. Sesmat, *Systèmes de Référence et Mouvements (Physique relativiste) : I, Genèse des théories de la relativité ; II, Principes de la théorie restreinte ; III, Les systèmes privilégiés de la théorie restreinte ; IV, Principes de la théorie générale ; V, Théorie relativiste de la gravitation ; VI, Les systèmes privilégiés de la théorie générale ; VII, Essai critique sur la doctrine relativiste* (Actualités scientifiques et industrielles, 486-492), Paris, Hermann et Cie, 1937, pp. 448, 10 fr. ; 12 fr. ; 12 fr. ; 12 fr. ; 15 fr. ; 5 fr. ; 10 fr.
- P. Frank, *La fin de la physique mécaniste* (Actualités scientifiques et industrielles, 414), Paris, Hermann et Cie, 1936, pp. 56, 10 fr.

- J. Pacotte, *Le réseau arborescent, schème primordial de la pensée*, Paris, Hermann et Cie, 1936, pp. 54, 10 fr.
- W. M. Kozłowski, *Rapports présentés aux Congrès Internationaux de Philosophie*, Prague, "Bibliothèque Internationale de Philosophie," 1935, pp. viii + 94, Kč 40.
- H. Spiegelberg, *Gesetz und Sittengesetz*, Zürich and Leipzig, M. Niehans, 1935, pp. 380.
- H. Spiegelberg, *Antirelativismus : Kritik des Relativismus und Skeptizismus der Werte und des Sollens*, Zürich and Leipzig, M. Niehans, pp. 100.
- G. E. Rodhe, *Ueber die Möglichkeit einer Werteinteilung*, Lund, C. W. K. Gleerup, 1937, pp. 226.
- O. Kraus, *Die Werttheorien : Geschichte und Kritik*, Brünn, R. M. Rohrer, pp. xviii + 515, Kč 140.
- G. Katkov, *Untersuchungen zur Werththeorie und Theodizee*, Brünn, R. M. Rohrer, 1937, pp. xi + 164, Kč 50.
- I Problemi della Filosofia del diritto nel Pensiero dei Giovani* (Dieci Anni di Esercitazioni nella R. Università di Roma, 1926-35), edited by G. del Vecchio, Rome, "Foro Italiano," 1936, pp. 222, L. 15.
- M. T. Rooney, *Lawlessness, Law and Sanction* (Degree Dissertation), Washington, D.C., Catholic University of America, 1937, pp. 176.
- A. C. Garnett, *Reality and Value*, London, G. Allen & Unwin Ltd., 1937, pp. 320, 12s. 6d.
- A. R. Whately, *The Focus of Belief*, Cambridge University Press, 1937, pp. x + 191, 8s. 6d.
- U. A. Padovani, *La Filosofia della Religione e il Problema della Vita*, Milan, "Vita e Pensiero," 1937, pp. 263, L. 25.
- S. Bulgakov, *The Wisdom of God : A brief summary of Sophiology*, London, Williams & Norgate Ltd., 1937, pp. 223, 6s.
- R. Mukerjee, *Theory and Art of Mysticism*, London, Longmans, Green & Co., 1937, pp. xvi + 308, 15s.
- M. C. Swabey, *Theory of the Democratic State*, Cambridge, Mass., Harvard University Press, 1937, pp. 234, \$2.50.
- J. J. Poortman, *De Noodzaak der Eenzijdigheid*, Assen, Van Gorcum & Co., 1936, pp. 32, f. 0.75.
- D. Bartling, *Over het Begrip "Leven" in de Kunstleer van Hedendaagse Nederlandse Literatoren*, Assen, Van Gorcum & Co., 1935, pp. 22, f. 0.75.
- L. Brunschvicg, *Le rôle du Pythagorisme dans l'évolution des idées*, Paris, Hermann et Cie, 1937, pp. 25, 10 fr.
- H. Gauss, *Plato's Conception of Philosophy*, London, Macmillan & Co. Ltd., 1937, pp. xxii + 272, 6s.
- D. Loenen, *Mens en Maatschappij in Plato's "Republiek"*, Assen, Van Gorcum & Co., pp. 23, f. 0.75.
- Platone : Il Protagora*, with Introduction and Notes by G. Calogero, Florence, G. C. Sansoni, 1937, pp. xxx + 162, L. 10.
- Platone : Il Critone*, with Introduction and Notes by G. Calogero, Florence, G. C. Sansoni, 1937, pp. xx + 44, L. 5.
- Cusanus-Texte : I. Predigten*, in Latin and German, with an Introduction and Explanations by J. Koch, Heidelberg, Carl Winter, 1937, pp. 210, M. 9.50.
- E. Troilo, *Interpretazione di Erasmo*, Padua, L. Penada, 1937, pp. 54.
- Cartesio nel terzo centenario del "Discorso del Metodo"* (supplement to vol. xix of the Rivista di Filosofia Neo-scolastica), Milan, "Vita e Pensiero," 1937, pp. xii + 807, L. 75.

- F. Olgiati, *La Filosofia di Descartes*, Milan, "Vita e Pensiero," 1937, pp. xvi + 577, L. 40.
- R. Descartes : *Discorso sul Metodo*, with Introduction and Notes by A. Levi, Naples, L. Loffredo, pp. liii + 108, L. 8.50.
- R. Descartes : *Principii di Filosofia, Libro I*, with Introduction and Notes by A. Levi, Naples, L. Loffredo, pp. liv + 72, L. 7.50.
- H. Gouhier, *Essais sur Descartes*, Paris, J. Vrin, 1937, pp. 299, 25 fr.
- Å. Petzäll, *Ethics and Epistemology in John Locke's Essay concerning Human Understanding*, Göteborg, Wettergren & Kerber, 1937, pp. 83, Kr. 3.
- S. Tschulok, *Lamarck : Eine kritisch-historische Studie*, Zürich and Leipzig, M. Niehans, 1937, pp. 190.
- L. Prat, *Charles Ronouvier, philosophe : Sa doctrine, sa vie*, Ariège, L. Labrunie, 1937, pp. 300, 25 fr.
- G. J. P. J. Bolland's Briefwechsel mit E. von Hartmann, published by the "Bolland-Genootschap voor Zuivere Rede," The Hague, H. de Brauw, pp. 144.
- B. Jakovenko, *Alcuni capitoli di storia della filosofia nordamericana*, Prague, "Biblioteca Internazionale di filosofia," 1936, pp. vii + 41.
- M.-A. Cochet, *La métaphysique de Paul Decoster et la science*, Bruges, "Sainte Catherine," 1937, pp. 61.
- L. Brunschvicg, *La physique du vingtième siècle et la philosophie*, Paris, Hermann et Cie, 1936, pp. 30, 10 fr.
- G. Berguer, *Un mystique protestant Auguste Quartier-la-Tente (1848-1936) : Fragments de son journal intime*, Geneva, Naville, 1937, pp. 145.
- Festbundel aangeboden aan Dr. J. D. Bierens de Haan*, Assen, Van Gorcum & Co., 1936, pp. 210, f. 3.90.
- Theodor Elsenhans *Lehrbuch der Psychologie, 1. Lieferung*, 3rd, completely altered, edition by F. Giese, Tübingen, J. C. B. Mohr, 1937, pp. 80.
- E. G. Boring, H. S. Langfeld, H. P. Weld and others, *A Manual of Psychological Experiments*, New York, J. Wiley & Sons Inc.; London, Chapman & Hall Ltd., 1937, pp. 198, 8s. 6d.
- F. Aveling, *Psychology : The Changing Outlook*, London, Watts & Co., 1937, pp. vii + 152, 2s. 6d.
- C. S. Myers, *In the Realm of Mind : Nine Chapters on the Applications and Implications of Psychology*, Cambridge University Press, 1937, pp. 251, 7s. 6d.
- T. J. Ragusa, *The Substance Theory of Mind and Contemporary Functionalism* (Degree Dissertation), Washington D.C., Catholic University of America, 1937, pp. viii + 101.
- R. Jarry-Guérault, *Les rapports limites de l'ordre et du libre arbitre dans l'évolution des sociétés : I, Figuration cartésienne du fait social*, Paris, Hermann et Cie, 1936, pp. 64, 15 fr.
- R. Roy, *Contribution aux recherches économétriques*, Paris, Hermann et Cie, 1936, pp. 45, 10 fr.
- W. L. Jones, *A Psychological Study of Religious Conversion*, London, The Epworth Press, 1937, pp. 397, 10s. 6d.
- M. Latour, *Premiers principes d'une théorie générale des émotions : Observations complémentaires (5^e and 6^e séries)*, Paris, F. Alcan, 1935, pp. 39 and 40.
- M. Phillips, *The Education of the Emotions through Sentiment Development*, London, G. Allen & Unwin Ltd., 1937, pp. 318, 8s. 6d.
- Sir J. Purves-Stewart, *The Diagnosis of Nervous Diseases*, 8th edition, London, E. Arnold & Co., 1937, pp. viii + 842, 35s.

- A. J. Rosanoff, L. M. Handy and I. R. Plesset, *The Etiology of Mental Deficiency with Special Reference to its Occurrence in Twins*, Princeton, N.J., Psychological Review Co., 1937, pp. 137.
- The Parent-Child Relation : the Psychological Background and Other Papers* (Individual Psychology Medical Pamphlets, No. 17), London, C. W. Daniel Co. Ltd., 1937, pp. 59, 2s. 6d.
- The Growing Child and its Problems*, ed. by E. Miller, London, Kegan Paul, 1937, pp. xiii + 231, 6s.
- Sir P. Hartog, *Secondary School Examinations and the Curricula of Secondary Schools, with Suggestions for Reform*, London, N.U.T., 1937, pp. 31.
- A. Ombredane, *Le problème des aptitudes scolaires, and Les inadaptés scolaires*, Paris, Hermann et Cie, 1936, pp. 57 and 84, 12 fr. each.
- E. Howald, *Der Mythos als Dichtung*, Zürich and Leipzig, M. Niehans, pp. 107.
- T. Michelson, *Fox Miscellany* (Bureau of American Ethnology, Bulletin 114), Washington, U.S. Government Printing Office, 1937, pp. 124, \$0.25.
- l'Abbé H. Breuil, *Oeuvres d'art magdaléniennes de laugerie basse (Dordogne)*, Paris, Hermann et Cie, 1936, pp. 30, 7 fr.
- E. Octobon, *Classifications néolithiques avec exemple de continuité dans la morphologie des pièces*, Paris, Hermann et Cie, 1936, pp. 41, 8 fr.
- R. F. Bennett, *The Early Dominicans*, Cambridge University Press, 1937, pp. xii + 189, 10s. 6d.
- K. M. S. O'Loughlin, *The Voyage to Illyria : A new study of Shakespeare*, London, Methuen & Co. Ltd., 1937, pp. 242, 7s. 6d.
- N. O. Lossky, *Three Chapters from the History of Polish Messianism*, Prague, "International Philosophical Library," 1936, pp. 31.
- E. Beneš, *Deux conférences sur T. G. Masaryk*, Prague, "Bibliothèque Internationale de Philosophie," 1936, pp. 24.
- J. L. Hromádka, *Masaryk as European*, Prague, "International Philosophical Library," 1936, pp. 38.
- R. Anthony, *Théorie de la dentition jugale mammalienne, I : La molaire des mammifères*, Paris, Hermann et Cie, 1935, pp. 70, 15 fr.
- R. Anthony and M. Friant, *Théorie de la dentition jugale mammalienne, II : L'évolution de la molaire chez les mammifères placentaires*, Paris, Hermann et Cie, 1936, pp. 79, 20 fr.
- H. Hering, *Dissociation de l'eau en H² et OH*, Paris, Hermann et Cie, 1936, pp. 23, 10 fr.
- M. Prettet, *Réactions en Chaînes*, Paris, Hermann et Cie, 1936, pp. 78, 20 fr.
- M. Schoen, *Problèmes d'Asymétrie dans les Processus Biochimiques*, Paris, Hermann et Cie, 1936, pp. 103, 20 fr.
- J. Duclaux, *Pression Osmotique, I : Partie expérimentale*, Paris, Hermann et Cie, 1936, pp. 64, 18 fr.
- K. C. Hayes, *The Logical Development of the Concept of Light* (Buchan Prize Thesis), Chapel Hill, N. Carolina, University of N. Carolina, 1936, pp. 22.
- Paroles d'un Sage : Choix de pensées d'African Spir*, Paris, "Je sers," 1937, pp. 65.
- No-Man's-Land* (Five Articles reprinted from *The Aryan Path*), Los Angeles, Theosophy Co., 1937, pp. 91.
- Annalen der critische philosophie, VI—1936*, ed. by Dr. D. Bartling, Assen, Van Gorcum & Co.

VII.—PHILOSOPHICAL PERIODICALS.

PHILOSOPHY OF SCIENCE, iv, 1 (Jan. 1937). **R. Carnap.** *Testability and Meaning—Contd.* [Second and final instalment (40 pages) of a paper whose first part appeared in iii, 4 and was reviewed in MIND, April 1937, page 270. Carnap abandons the radical form of the principle of verifiability which identifies meaning and verifiability, and now undertakes to determine the exact relations between meaning and the notions of verification, confirmation and testing which were defined in the first part. The investigation must issue in a set of alternative *proposals* for the construction of possible languages. If the languages are to be used by the physicist, say, differences in respect of the choice of a set of primitive predicates are relatively trivial; for physics can be so formulated as to be independent of the particular sense-organ employed in verification. Important disagreement between philosophers does, however, arise with regard to restrictions placed upon the use of quantifiers, *i.e.*, the kind of general laws which are permitted. Carnap proceeds to describe a series of languages, L_0 , L_1 , L_2 , . . . and L_∞ , of progressively increasing complexity. In L_0 all statements are truth functions of the basic statements; in L_1 statements of form $(x, y, z, . . .) M(x, y, z, . . .)$ but not $(\exists x, y, z, . . .) M(x, y, z, . . .)$ may occur; in L_2 the latter form occurs but not $(u, v, w, . . .) (\exists x, y, z, . . .) M(x, y, z, . . ., u, v, w, . . .)$. Thus each language contains the preceding language in the series but permits of more complicated groupings of quantifiers. In L_∞ every arrangement of quantifier is permitted. Carnap argues that once the principle of verifiability is sufficiently relaxed to allow the validity of general laws which cannot be directly translated into conditional statements about experiences but are connected with observation only by reduction chains (*i.e.*, imply but are not implied by a set of observations) there seems no natural halting place within the series L_1 , L_2 , . . . of languages. "It is true that the greater the number of operator-sets in a sentence S is, the greater is the distance of S from the empirical basis, *i.e.*, from the atomic sentences, and hence the more indirect and incomplete is the possibility of confirming or testing S and $\sim S$. But there is no number of operator-sets for which the connection with the empirical basis would completely vanish." And the choice of L_∞ as a suitable language for physics which can be loosely expressed as satisfying the demand that "every synthetic sentence must be *confirmable*" is held to be a sufficient formulation of the principle of empiricism. The paper ends with a discussion of the nature of predictions.] **P. Frank.** *The Mechanical versus the Mathematical Conception of Nature.* [Attacks the assumption, which idealists and their opponents alike are alleged to make, that the extensive use of pure mathematics in modern physics marks a significant transition from the use of mechanical models to theories of an abstract mathematical type. The interpretation of physical laws in terms of the motions of gross material bodies has always been, at best, an imperfect analogy with the laws of macroscopic mechanics and is altogether subordinate to the condition that the *consequences* of the laws must be observable. Frank shows that this positivistic criterion is satisfied by modern forms of general relativity and quantum mechanics. Reference is made in the course of the argument to the views of Clerk-Maxwell, Boltzmann, Smuts, Jeans, Bavink, Weyl, Lenin and recent writers in Russia and Germany. (It is a pity that this able paper has been so badly translated from the German. The pervasive clumsiness of the style occasionally degenerates into un-

intelligibility and at all times does grave disservice to the author's views. The words 'unintintable' and 'pauschal' have baffled at least one reader.)]

G. K. Chalmers. *The Lodestone and the Understanding of Matter in Seventeenth Century England.* [Interesting and learned description of the views on the nature of magnetism held by William Gilbert and his predecessors. Special attention is paid also to the work of Sir Thomas Browne.]

S. Rosenzweig. *Schools of Psychology: A Complementary Pattern.* [Proposes to regard the various schools of psychology as complementary elements in a total configuration. Supports this view by analysing five types of psychological theories in terms of "characteristic problem", "temporal span of observation in typical methods" and names of "conceptually allied sciences".] Discussion (correspondence).

H. S. Leonard. *The Pragmatism and Scientific Metaphysics of C. S. Peirce.* [Review of Vols. v and vi of the Collected Papers.] A new Budget of Paradoxes. Supplement: **T. Hailperin.** *Foundations of Probability in Mathematical Logic.* [Suppose a truth function, f say, of elementary propositions, p, q , say, is written in the familiar matrix form to exhibit the dependence of its truth values upon those of its constituents. Thus if f is $p \vee q$, the columns of corresponding truth values of p, q , and f , respectively are $T T F F$, $T F T F$, and $T T T F$. The probability of f being true, $P(f)$, is defined as the ratio of T's in the last column to the total number of truth values there. Assuming p and q to be atomic propositions, $P(p \vee q)$ is thus $3/4$. The properties of the relation P are developed systematically. It is found possible to interpret, within this system, C. I. Lewis' system of strict implication, Keynes' axioms of probability and the 'many-valued' logics.]

REVUE NÉO-SCOLASTIQUE DE PHILOSOPHIE. Tome 40. (Deuxième série, No. 53.) Fév. 1937. **A. Hayen.** *La théorie du lieu naturel d'après Aristote.* [A carefully documented discussion of Aristotle's doctrine of place. The writer's object is to show the internal coherency of the Aristotelian theory, in reply to Hamelin and others who regard it as an inconsistent amalgam of a "cosmographical" with a discordant "dynamical" conception of τόπος. Deserves the attention of all Aristotelian students.] **W. J. Dwyer.** *Le texte authentique du "de aeternitate mundi" de Siger de Brabant.* [Four MSS. are now known of this work, called here A, B, C, D. The close interconnection of B, C, D is undoubted; the question is what is the relation between A and B. Mandonnet, in his first edition, treated A as the authentic utterance of Siger; in his second edition he reversed his judgement. It is argued here that Mandonnet's change of view was justified; B is the work of Siger as finally intended by himself for circulation, A represents a student's report of the argument as it was first delivered orally.] **N. Balthasar.** *Le chrétien peut-il croire de foi divine en l'existence de Dieu?* [A defence of the writer's previous assertion that, since "divine" and "meritorious" faith in God's revelations presupposes an antecedent conviction of the existence of God, this conviction itself must be distinguished from "divine faith," against recent criticism by M. Gilson.] **L. Cochet.** *La pensée. Ses responsabilités, ses possibilités d'achèvement.* [A sympathetic, if occasionally obscure, exposition of the general argument of M. Blondel's *La Pensée*.] **A. D. Wallhens.** "Philosophy and History." [Summarises the contents of *Philosophy and History. Essays presented to E. Cassirer*.] **F. Van Steenberghen.** *Monographies récentes sur les philosophes du moyen âge.* [A full account of recent works published in this field, covering the period down to the death of Dante.] *Le Congrès thomiste international de Rome* (nov. 1936). Book reviews, *Chroniques, Répertoire Bibliographique.*

Tome 40. (Deuxième série, no. 54.) Mai, 1937. **I. H. Thielmans.** *Essai d'introduction à une Métaphysique existentielle.* [An interesting article, though difficult to follow. An "existential metaphysic" is one which starts from the experience of existence as we all have it in our own persons, carefully purified from all that is incidental and contingent. Such experience may be "defined in use" as the activity of the subject in the possession of itself. The subject, in this phrase, is strictly one and transcendental, since all that distinguishes my personality from yours has been eliminated from the outset. (This sounds like the *Io-transcendentale* of Gentile, but soon proves to be very different.) The whole rhythm of our human life depends on the fact that each of us is "the subject in the activity of its self-possession" only *virtualiter* or potentially; our task in life is to translate this virtuality into act; metaphysics is an indispensable stage in the process, and can therefore never be, for us in this life, mere "speculation". The realisation of the programme presupposes the eternal actual existence and activity of the supreme "subject in active possession of itself," that is, of God, and our partial and fitful "possession of self" can only be a possession by "participation". The line of thought is most promising, but the views expressed about the method of metaphysics must perhaps remain hard to comprehend until the writer proceeds with the promised fuller development of his theme. Perhaps, also, he passes rather too quickly over what some of his readers will feel to be the gulf between accepting his argument for the existence of God, and acquiescing implicitly in the right of an ecclesiastical corporation to regulate our lives in detail on the strength of its claim to possess an authoritative revelation from God.] **D. Salman.** *Note sur la première influence d'Averroès.* [A short historical article of importance. Averroism, in the form in which it was combated by St. Thomas, and officially condemned, is bound up with Averroes' famous doctrine of the "separate possible intellect", which is numerically singular and one and the same for all men. Hence historians have commonly attributed this doctrine to all the Latin writers who were markedly influenced by Averroes in the period 1230-70. The article shows, with full documentation from the works of R. Bacon and St. Albert, that this is a misconception. The first students of Averroes in the West were so far from thinking that the "possible intellect" could be "separate" and numerically the same for all men that they erroneously drew from the parallelism asserted by Averroes between the "possible intellect" and the *intellectus agens* the mistaken conclusion that he supposed both to be "faculties" of the individual human mind. It was the doctrine that the *intellectus agens* is not 'separate' which was at first supposed to be peculiar to Averroes.] **O. Lottin.** *Le libre arbitre chez Godefroid de Fontaines.* [A careful and fully documented study of the way in which, in his *Quodlibets*, G. attempts to find a *via media* between the voluntarism of Henry of Ghent and the undue intellectualism, as he regards it, of St. Thomas, in dealing with the problem of free-will.] **H. van Camp.** *La "Philosophie chrétienne" de Louis Thomassin de l'Oratoire (1619-95).* [Gives a fullish account of T. as an interesting example of the kind of philosophising, drawing chiefly from Plato, St. Augustine and Descartes, which was characteristic of the Oratorians in the seventeenth century, and reaches its high water-mark in Melebranche.] *Études Critiques.* **A. Mansion.** *Trois ouvrages importants sur la philosophie de Platon.* [Valuable reviews of P. Frutiger, *Les mythes de Platon* (1930), L. Robin, *Platon* (1935) and W. F. R. Hardie, *A Study of Plato* (1936).] **P. Harmignie.** *Ouvrages récents de philosophie juridique, sociale et morale.* Shorter notices of books, *Chroniques* and *Répertoire Bibliographique.*

VIII.—NOTES.

A NEW "EPIMENIDES."

A NOTE by Mr. Perelman in *MIND* (Vol. 45, 1936, pp. 204-208) makes it obvious that at least some of the so-called logical paradoxes (*i.e.* expressions involving a vicious-circle fallacy) are self-contradictory expressions (*e.g.* the "paradox" of the "barber who shaves only those who do not shave themselves"). This result should naturally induce one to re-examine the other alleged logical paradoxes, and I wish to call your attention to that of Epimenides. But I shall begin with a somewhat different paradoxical situation because it brings out the difficulty of the "Epimenides" more clearly than that paradox itself.

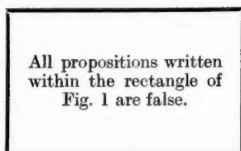


FIG. 1.



FIG. 2.

Let the expression within the rectangle of Fig. 1 be called A. Either A is a proposition or not. Suppose A is a proposition, then either it is true or false. But if A is true, then it cannot be dealing with any other proposition than itself (since there are no others within the rectangle), and therefore it is false. But if A is false, then the only proposition within the rectangle, *viz.* A, is true. Now this is a vicious circle, and the familiar resolution would be to the effect that A is meaningless and only appears to be a significant proposition.

But then, if A is not a proposition, there are no propositions within the rectangle at all. The statement "It is false that there are propositions within the rectangle of Fig. 1" is true. But if it is true, then the statement "It is false that there are true propositions within the rectangle of Fig. 1" is also true. But this last statement is the same as A, since, " $\sim(\exists x).fx. \sim gx$ " is the same as " $(x).fx \supset gx$." Hence if A is not a proposition, A is true; but since nothing except a proposition can be true, if A is not a proposition, then A is a proposition. A vicious circle reappears.

Observe that with reference to Fig. 2 the statement "There are no true propositions within the rectangle of Fig. 2" will be recognised as a true proposition precisely because there are no propositions within the rectangle of Fig. 2. But the meaning of this proposition has no reference to, and therefore should not depend on, the place or date of its formulation. If it is meaningful and true as written above, it should not cease to be true and meaningful when one chooses to write it within the rectangle of Fig. 2.¹

¹ Mr. F. Ramsey has tried to solve the "epistemological paradoxes" by reference to the ambiguity of the words "meaning," "naming" or "defining." (*Cf. The Foundations of Mathematics*, Kegan Paul & Co., 1931, p. 48.) But in the case under discussion his method is powerless, because "writing" is an unambiguous word for a certain definite class of acts.

A slight change in the "Epimenides" problem brings out the same kind of difficulty. According to the *Principia* Epimenides the Cretan said that "All propositions made by Cretans are false", and all propositions made by Cretans (other than Epimenides) are false. In the changed version, instead of assuming that all propositions made by Cretans (other than Epimenides) are false, we assume that every Cretan made one and only one statement, and that one is the same as Epimenides' assertion, viz. "All propositions made by Cretans are false." Then, if this statement is not a proposition, it is true, because there are no statements made by Cretans; but if this statement is true, it is a proposition. And again it would seem that the meaning and truth-value of the general proposition cannot depend on whether it is asserted by a Cretan or not.

I believe that the solution of the difficulty must be along the line which I suggested in my *Theory of Logic*.¹ According to this suggestion, every proposition *A* entails the conjunction *A* and the proposition "*A* is true." (The distinction between *A* and "*A*" symbolises the distinction between a given proposition and a sentence which may or may not adequately express the proposition.) Hence, if *A* announces that the proposition "*A*" is false, then *A* is self-contradictory, unless the phrase 'the proposition "*A*"' means a different thing on each of its occurrences. Thus a Cretan must mean, by using the Epimenides sentence, that "It is a true Cretan proposition that all Cretan propositions are false", which is self-contradictory; but a non-Cretan merely means by the Epimenides sentence that "It is a true (non-Cretan) proposition that all Cretan propositions are false", which is true if self-contradiction is falsehood and false otherwise, but in either case is significant.

A. P. USHENKO.

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ENTGEGNUNG.

DEM Herrn Rezensenten A. C. Ewing danke ich für die loyale in der April-Nummer dieser Zeitschrift auf S. 259 f. erschienene Besprechung meiner Schrift "Das Verhältnis der Kategorienlehre zur formalen Logik. Ein Versuch der Überwindung Immanuel Kants", Rostock: Carl Hinshorff, 1927. Im Einzelnen erlaube ich mir noch auf folgende Punkte hinzuweisen.

(1) Meine Kategorienlehre von 1927/29 fusst ausschliesslich auf dem berühmten Fundamental-Satz der Kantischen Kritik: "Derselbe Verstand also, und zwar durch eben dieselben Handlungen, wodurch er in Begriffen, vermittelt der analytischen Einheit, die logische Form eines Urtheils zu Stande brachte, bringt auch, vermittelt der synthetischen Einheit des Mannigfaltigen in der Anschauung überhaupt, in seine Vorstellungen einen transscendentalen Inhalt" (Kr.d.r.V. B, S. 105), wie auf Seite 32 meiner Schrift ausdrücklich hervorgehoben wird. Dementsprechend enthält meine Tafel der Kategorienformen (S. 83 ff.) neben zahlreichen anderen auch die meisten Kantischen Kategorien: Einheit, Mehrheit, Allheit (S. 90); Sein, Nichtsein (S. 95 f.); Begrenztheit (S. 90); Causation (S. 92 f.); Möglichkeit, Unmöglichkeit, Notwendigkeit, Zufälligkeit (S. 95).—Der Untertitel meiner Schrift von 1927 erscheint dadurch gerechtfertigt, dass meine ontologische Kategorienlehre entgegen der Behauptung Kants

¹ Harper & Brothers, 1936, pp. 179 f.

von der Unmöglichkeit jeder deduktiven Metaphysik streng deduktiven Charakter besitzt (S. 33), was auch besonders in meiner Schrift von 1929 zum Ausdruck kommt (vgl. meine Selbstanzeigen in den "Kant-Studien", 1930, Bd. 35, H. 2/3, S. 392 f.; 1932, Bd. 37, H. 1/2, S. 210).

(2) Die von dem Herrn Rezensenten vermissten Beispiele für das Vorkommen der Kategorien und Kategorienformen finden sich auf Seite 42 ff., hervorgehoben durch das gesperrte Wort "bestimmt", weiterhin auf S. 102, 113, 117, 118, 120, 127, 129 ff.

(3) Die von dem Herrn Rezensenten vermissten Fundamental-Definitionen, auf welche alle übrigen Definitionen zurückgeführt werden, stehen auf Seite 41 bis 48. Fundamental-Strukturen wie "ideal-ontologisch gegenständliche Einheit" (S. 48) lassen sich an den ideal-ontologischen Gegenständen nur unmittelbar erfassen. Ein Ausdruck wie "ideal-ontologisch intra-typisch-phaenomenhafte Einheit" ist analog dem bekannten Ausdruck "inter-subjektive Allgemeinheit" gebildet, bedeutet nach der einfachen Wortübersetzung die Beziehung der Einheit, welche innerhalb eines ideal-ontologisch typisch-phaenomenhaften Ganzen besteht, und wird auf Seite 63 genau definiert.

(4) Besonders eindringliche Beispiele für die philosophische Bedeutung meiner Kategorienlehre sind die Auflösung des Universalienproblems durch eine Synthese zwischen Platon und Aristoteles (S. 110 f.) sowie die Anbahnung einer Auflösung des sogen. Humeschen Problems der Substanz und der Kausalität (S. 156, 163 f.) und des Problems des Organismus (S. 165 f.). In bezug auf das Lebensproblem bin ich allerdings inzwischen durch Weiterführung meiner Kategorieranalysen zu wesentlich anderen Resultaten gekommen. Jedenfalls aber bleibt der grundlegende Gedankengang dabei unverändert folgender: gelingt es, aus den Axiomen der klassischen Logik als Seinsgesetzen ein umfassendes System ontologischer Kategorien zu deduzieren, so muss unter diesen Weltstrukturen ebenso wie die Struktur des Universale und die Struktur der Kausalität auch die Struktur enthalten sein, welche das Wesen des Organismus erklärt und mit der auf induktivem Wege gewonnenen Erklärung desselben übereinstimmt.

(5) Auf Seite 9 meiner Schrift habe ich ausdrücklich darauf hingewiesen, dass ich meiner Betrachtung der gedanklichen Logik das bekannte Lehrbuch von A. Pfänder zugrunde lege, welches in Deutschland als die z.Z. beste Darstellung der klassischen Logik gilt. Für die gebrachte Subjekt-Praedikat-Theorie des Urteils (S. 12) wie für die Auffassung des Existenzialurteils (S. 13 f.) muss ich also die volle Verantwortung dem genannten Autor überlassen, zumal diese wissenschaftslogischen Spezialprobleme für meine seinslogischen Untersuchungen völlig irrelevant bleiben.

(6) Das Objekt der Wissenschaftslogik sind die reinen Gedankenformen (d.h. die Formen der Begriffe, Urteile, Schlüsse), welche von den empirischen Subjekten getragen und dementsprechend an denselben vom Wissenschaftslogiker rezeptiv erfasst werden, nicht aber logistisch-mathematische Konstruktionen oder transsubjektive metaphysische Wesenheiten, die nur als Gedankeninhalte auftreten können.

Dr. OSKAR FECHNER.

Berlin.

[It would take too much space to go into the points raised in detail. I can only say that I have looked up the references given and do not find that they remove the obscurity of which I complained, though no doubt this may well be partly my own fault. Nor can I admit that the reassertion

at the present day without argument of the doctrines that all judgments are of the subject-predicate form and that existential judgments are to be analysed as asserting a relation between the subject and existence (5) is sufficiently excused by the fact that the doctrines also occur in another well-known book on logic.

A. C. EWING.]

DEATH OF DR. SCHILLER.

We regret to announce the death of Dr. F. C. S. Schiller, which took place last August at Los Angeles. We hope to publish an Obituary Notice in the next number of *MIND*.

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